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EARLY EDUCATION.

THE

DOCTOR'S ADVICE

OR

How, When and What

TO EAT AND DRINK

HOW TO SECURE

Good Health and Long Life

How to Prevent and Treat Disease

WHAT

MOTHERS AND NURSES

OUGHT TO KNOW

How to Care for the Baby, and give to our Boys and Girls the best Moral, Mental and Physical Culture

When and Whom to Marry

How to choose a Wife or Husband, and How to be Happy.

BY ALVARADO MIDDLEDITCH, M. D.

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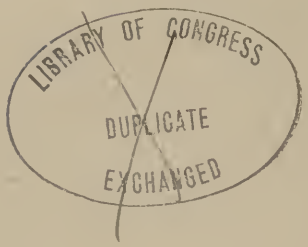
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PREFACE.

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THE HOME is the Church and State in embryo. The foundations of religion and government are laid within its precincts and firmly cemented with the lasting influences of the Home-Life. The objects of this volume, as will be seen by a glance at the Table of Contents, are to aid in the construction of homes, where the inmates may have good health and long life; to teach the laws of health; to prevent disease; to show how the sick and frail may regain health; to instruct parents in the physical management of children; to assist in their training and government; to guide in their intellectual and moral culture to perfect manhood and womanhood; to conduct the young man and young lady into social and business life; to happily marry them and place them in their earthly paradise—home. And as this life does not end all, it treats briefly of life, death, and immortality.

How well the work has been performed may be learned by a perusal of its pages.

Much space has been given to the prevention of disease as well as to the care of the sick. We do not realize the value of health until we lose it. "Blessings brighten as they take their departure." Our hands are so busy and our brains so exercised we forget that the laws of health are uniform and inexorable. But this uniformity is for our advantage. Under the best sanitary rules the child, born with a perfectly sound constitution, should never be sick, either in early or later life. Whether or not a man shall live to old age and be healthy, depends more on his knowledge of, and obedience to the laws of health, than on the skill of his physician, whose chief business, under the present system of medical science, is to treat diseases rather than prevent them. The value of a work of this kind will, therefore, be apparent to every one.

The author, after many years of interesting practice of medicine, close observation of children and adults, believes himself prepared to write from experience and understandingly on the subjects here treated. His aim has been to write with scientific accuracy, and yet avoid technicalities; plainly, so that all can understand; briefly, and yet sufficiently full to contain the essentials.

The volume is cordially sent forth on its mission, and if it shall assist in elevating any to a higher plane of physical, intellectual, and moral life, the author will not have labored in vain.

ALVARADO MIDDLEDITCH,

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The Doctor's Advice

For what is wealth
To the boon of health
And its sweet attendant pleasures?—Anon.

Health is one of the foundation pillars of happiness in the home. It is a condition of the best instruction and the best education. It is an essential preliminary to the best success in the best work, and to the highest attainment in the widest usefulness. Without it there is sadness at the hearthstone, silence and sorrow, instead of cheerful words and happy hearts. What are fortunes and honors in the absence of the future health and vigor of our loved ones? What is home itself, where disease abides as a permanent visitor, and poisons every perfume with a malarious infection?—Home and Health.

The first sure symptom of a mind in health
Is rest of heart and pleasure felt at home.—Dr. Young.

Nature does require
Her time of preservation, which perforce
I, her frail son amongst my brethren mortal,
Must give my attendance to.—Shakspeare.

Be sober and temperate, and you will be healthy.—B. Franklin.

Health is the soul that animates all enjoyments of life, which fade, and are tasteless, if not dead, without it.—Sir W. Temple.



A PICTURE OF HEALTH.

THE DOCTOR'S ADVICE.

GOOD HEALTH, LONG LIFE AND HAPPY HOMES.

CAUSE AND PREVENTION OF DISEASE.

THE Body and Mind are so intimately connected that a man cannot, without a sound physical constitution, reach in any sense his highest and best. Health is a need in his chase after wealth, or his grand march after nobility of soul.

But the great value of soundness of body is not a question in dispute. All admit it. Few, however, pause to consider whether it is really true that a healthy life is the natural sequence of a knowledge of, and obedience to, hygienic laws. It *is*, however. And yet the statistics of mortality demonstrate that we are unwise. For men *ought* to live no less than eighty years; while only about four per cent. actually do live to what in common parlance is called old age.

Hence ninety-six per cent. is made up of deaths from inherited and accidental causes; a great proportion of which are *artificial* and *preventable*. And so with cases of illness in a still greater proportion. The most of us, it may be presumed, would prefer to take the "ounce of prevention" and be well, than to be sick and take the "pound of cure." My aim all the way along will therefore be to give the reader the benefit of the prevention, rather than the cure.

In 1685, which was not considered a sickly year, one in twenty of the people of London died. At present only one in forty dies annually. Thus the better knowledge of hygiene

has, within that time, reduced the death-rate by one-half. And the future looks still brighter, for the people are becoming aroused to this question—the *preservation of health;* and I predict that the time is not far distant when one in eighty will cover the yearly mortality.

The laws of health are as inexorable as fate. The average man may not evade them with impunity. No man can perfectly obey them who is ignorant as to what those laws are. How can he be other than ignorant unless he learns from those who have made these things a study? The unconcernedness of some in regard to the preservation of health does not arise from a willingness to be sick, but that they have never been awakened and quickened to the necessity of knowing, and practising what they know.

The impossibility of giving directions by which *all* may always be well is self-evident. Yet it is quite possible to give hints which will help many to escape the ills which besiege the human race.

TEMPERAMENTS AND DISEASE.

There seems to exist a special affinity between certain temperaments and certain diseases.

Bilious temperaments are inclined more than others to diseases of the liver, stomach and bowels. Hence such should especially avoid the causes which produce those diseases. (See subject of Food, Pure Air, Exercise.)

Lymphatic temperaments are peculiarly liable to scrofula, consumption, and skin diseases; and the prevention consists of course in shunning the causes. (See those diseases, further on.)

Sanguine temperaments seem especially liable to affections of the heart, brain, and to rupture of blood-vessels. They should abstain from such articles of food and habits of life which generate too much blood; conduct business with the even uniformity of nature; control the temper, and make the conduct of their lives above reproach. (For description of the temperaments see another chapter.)

AGE.

Age has to do as to choice of disease. Thus the infectious diseases, bowel complaints and bronchitis are most prevalent

and fatal with children. It is estimated that more than one-fifth of all children born, the world over, die before the close of the first year; and in cities, about one-half before the age of five years. We shall before this book ends show somewhat how this wild torrent of death may be stemmed.

During the two and a-half decades of years following the age of twenty, a healthy man who obeys sanitary laws may defy every enemy to good health; after forty-five the danger increases; and in old age the slightest cause is often sufficient to produce disease and death.

Dyspepsia occurring in persons at any age, and which is especially prevalent in the decline of life, is often caused by decay of the teeth. Hence the skill of the dentist should be called upon to reproduce that part of the corporal machine which has passed out of existence.

The body is, in every stage of life, constantly undergoing disintegration or waste, and renewal. In childhood the renewal overbalances the waste; hence the growth of the child. In robust manhood the renewal is fully equal to the disintegration. Not so in old age. Then not only are the voluntary muscles weakened for want of such complete renewal, but so also are the semi-voluntary and involuntary muscles; as those of the chest and heart. In consequence of this, if the aged take violent exercise, as running, or going rapidly up-stairs, a difficulty of breathing is manifested. The hands and feet easily become cold, as the result of enfeebled action of the heart. Hence an old person's physical nature earnestly calls for caution as to exercise and warmth; and careless heed as to the warning costs many attacks of pneumonia, inflammation of the heart's membranes, and many lives.

In vigorous life, the involuntary muscles of the bowels generally act with sufficient force to propel along the contents of the alimentary canal. These muscles are, in old age, apt to become weakened; and hence the bowels to become constipated. This torpor may, if neglected, be the cause of piles, affections of the liver, or dyspepsia. The same condition has a tendency to cause a determination of blood to the head; which, with

straining at stool, may bring on apoplexy. Persistent constipation, at *any* age, should never be allowed; much less in old age.

Persons having a tendency to constipation may often remove or regulate the tendency by the use of laxative food; such as onions, Graham mush, fruits, etc.; or, a cup of hot water drank slowly one hour before breakfast, and an orange at the same time; very effectual; or by injections of warm water. If medicines must be used, the following may with great advantage be selected from: Some of the mineral waters, as Congress or Empire. Calcined magnesia in teaspoonful doses for an adult. Or, Fluid extract of Cascara Sagrada and Berberis Aquifolium, equal parts. Dose, a teaspoonful for an adult at bedtime; to be diminished or increased according to the effects produced.

In old age, when the physical and mental powers are rapidly failing, a judicious change of scene, or of climate, or of employment may often prolong the life many years. But no one who has lived fifty years, however hardy he seems to be, should persist in performing the same amount of manual or mental labor which it was possible for him to perform when in the vigor of life; and the labor should grow "beautifully less" as age wears on. Neither should one, when on the downward grade of life, retire from business altogether. Better one *wear* out than *rust* out.

HEAT AND COLD AS CAUSES OF DISEASE.

Certain diseases are cured by the advent of winter; and some others by the coming on of summer. Yet intense heat and cold are, as a rule, not only not curative, but decidedly productive of disease.

Heat.—The reader need not be told that an exposure to the intensely heated rays of the sun sometimes produces sun-stroke. But people are not so well aware that sun-stroke may be the result of an exceedingly heated atmosphere without the influence of the direct rays of the sun. It is oppressive, overpowering heat which produces this dangerous mischief to the brain.

The sure prevention so easily understood is not always so easily applied. Hence during necessary exposure, such means as *are* practical should be brought to bear in the defense, to wit: keeping a wet handkerchief in the hat; oft wetting the face and head; holding an umbrella over the head; abstaining from violent exercise. If, during exposure, giddiness with heat and pressure about the head occurs, danger is impending, and one should at once seek a cool place, repeatedly dip his head, face and neck into cold water; or gently rub the same with a piece of ice, until the natural temperature is established. A few doses of belladonna will assist in the recovery.

The summer time is, to our children, the most trying and the most murderous of all the year. And the people look upon the blood-curdling slaughter as if it were predestined by the gods! They do not pause to ask themselves if one-half of our children must die; but rather take it for granted that there is no help for it, and bear up under it the best they can, or are crushed by the blows. Must parents look up to the silent heaven with a beseeching, wailing cry on their lips, when inexorable death is crushing out the lives of their darlings, and *never* receive a pitying and saving response? Mothers, though the flood is strong that bears them down, if you will heed the directions and the warnings written on the subject—"The Physical Management of Infants and Children"—you can stem that flood.

Cold.—The first deleterious effects of exposure of the body to intense cold are an uncomfortable stiffness of the limbs, and frost-bite. The prevention during such exposure is, of course, additional clothing, or rapid exercise. But when a part is already frozen, the remedy is, gently to rub it with ice or cold water, so as to thaw it *gradually*. The constitutional effects of cold may be very serious, to wit: internal congestions. These congestions are caused by the cold's power to constrict the fine blood-vessels of the surface of the body; which drive the blood from the surface to internal organs, especially to the weaker organs, thus overcharging them, and producing damaging results.

Of Taking a Cold.—There is a vast difference in different

persons as to the ease with which they take cold; and their conduct should be regulated accordingly. The more susceptible should take special care to regulate the quantity and quality of clothing according to the weather: they should avoid cold draughts, which have a tendency suddenly to cool the body, or a part of the body; especially during sleep is such exposure a danger; and so is cold striking upon any small portion of the person, and especially on the back of the neck, as it rushes through the crevices of doors and windows. Pettenkofer has shown that forty-three gallons of air can pass, per hour, through a square yard of an ordinary brick wall. Hence sensitive persons often take cold by sitting closely to the outside walls of a room.

Many receive a cold by omitting to put on flannel underclothing, or overcoats sufficiently early in autumn; or by leaving them off too soon in the spring.

Wet clothing, and especially wet shoes and stockings, should always, when possible, be avoided by every one. When one necessarily gets wet, he should move about briskly and keep himself in motion until he can put on dry apparel.

When one has first taken cold, he may often escape the evil consequences by soaking the feet in very warm water, going to bed, covering up sufficiently warm to facilitate free perspiration, and taking eight drops of the following mixture, to wit: alcohol nine parts, Homœopathic tincture aconite one part; mix. If the throat is sore, belladonna may also be taken, prepared in the same way, and taken in the same dose: one dose of each being often sufficient; or 6 grains of quinine, or, what is far better, an electro-thermal bath.

UNAVOIDABLE AND AVOIDABLE CAUSES OF DISEASE.—HOW TO MODIFY THE ONE AND CONTROL THE OTHER.

Sanitary science has established the fact that man is intended to live a natural period of existence. While it is true that it is from *without* that causes arise which tend to shorten life and to kill; and that some of those causes, as sudden atmospheric changes, etc., are not within our control; it is no less true that

we ought to have been able victoriously to resist all ordinary influences or causes. It is owing to ignorant or willful disobedience to sanitary laws, extending through many past generations, that man's vitality has become so lowered as to render him unable to resist and escape illness and premature death. We may yet do very much to modify the effects of those unavoidable causes of sickness, and control completely the avoidable; such as our personal excesses, sanitary surroundings, etc. Let us here very briefly consider a few of these excesses; some of which will receive a fuller attention further on.

1. INTEMPERANCE as a cause of disease, and of premature death.

The statistics of Life Insurance Companies prove that even moderate drinking shortens the average human life. One report covering a period of ten years, reads: while 1,110 death were expected among the abstaining insurers, only 801 deaths occurred. Whereas, during the same period, the number expected to die among the moderate drinkers amounted to 2,002, and the number of deaths which actually occurred was 1,977." So much for moderate drinking.

But it is excessive drinking that slays as a pestilence. It is a physiological impossibility that a man may repeatedly become intoxicated, and be as well as ever after "his drunk" is over. He soon will find some little ailments stealing on; such as habitual headache, neuralgia, susceptibility to colds, want of appetite; blueness of the countenance as a consequence of an enfeebled circulation of the blood. Then dyspepsia, mental depression, palpitation. If these danger signals are unheeded, the intemperate man may, ere long, expect the advent of organic disease of the heart, aneurism, drunkard's liver, affections of the kidneys, twitching of the muscles, delirium tremens. The craving for drink will, by that time, have become so irresistibly imperious that the victim, in all probability, will find relief only in an early grave. What answer can America give to the 128,000 drunkards' graves which England and Wales dig yearly? But a man would be better in his grave, than living a hopeless sot.

The primary remedy for all the physical and moral evils which alcohol produces is evidently total abstinence.

2. Tobacco.—With some persons tobacco may not, when used moderately and after meals, produce any decidedly injurious effects. Its use is no less a miserable, filthy habit, and with many unsafe, producing various diseases, especially constipation, dyspepsia, palpitation of the heart, etc. It is dangerous to the morals of all.

3. Food and Disease.—The truth that there is a great deal of intemperance not belonging to alcohol ought to be more generally and practically received. Overeating, using unsuitable food, irregular eating, eating hurriedly are all other names for intemperance, and are productive of much illness to adults and of much more to children. It is not an overstatement, that one-fourth of all Americans over thirty years of age are more or less dyspeptic; and that their dyspepsia owes its origin to some fault relative to food or drink. As to children, even in England, where sanitary laws are much better obeyed than here, of 1,000 children born, 150 die before reaching the age of one year. It is estimated by good authority that at least one-third of those deaths are caused by improper feeding. Who can estimate the great number that suffer but do not die?

4. The Social Vice *vs.* Health.—All human passions when properly directed are for the good of man; the sexual instinct, a source of pleasure without regret. It is when man and woman visit forbidden fields that the fruits of it are mischievous to the partakers and to succeeding generations.

What physician cannot count dozens of puny, diseased children to whose parents belongs shame for it? Who but physicians know the amazing number of parents, many of them highly respected, who are corrupted by that disreputable disease which may not be pronounced without a sense of shame? There ought to be a cure for this great social evil, but who can discover the cure? One step, and an important one, would be made in the right direction were parents to reserve their mock modesty for occasions and purposes of less moment, and warn their sons and daughters at their age of greatest danger, against these

things. They can discipline in regard to the very small social proprieties, but as to this monstrous impropriety which overwhelms so many characters and lives, their tongues are silent as the grave.

5. Irregular Habits and Disease.—The practice of turning night into day lays the foundation of many and serious ills. For instance, dancing is a healthy exercise, when properly conducted as to time, mode and place; but according to the fashion, a ball may not commence before ten or eleven o'clock, nor end till the small hours of morning. Conducted in close rooms impregnated with the carbonic acid from the lungs and the excretions from the bodies of the multitude, it becomes a prolific mother of pale cheeks and consumption.

Students and business men who crowd upon the hours of night, when they should be sound asleep, are in danger of so lowering their vitality as to open a gap for some lurking disease to pass in, or of so exhausting the brain-power as to cause sleeplessness, and often inflammation of the brain or its membranes, or its fatal softening.

6. Impure Air is a cause of consumption, scrofula, typhoid fever, diphtheria, scarlet fever, diarrhœa, erysipelas, pyæmia, and many other conditions of ill health. Impure air, such as exists in ill-ventilated houses, or which proceeds from badly constructed drain-pipes, privies, pens for swine, cess-pits, and all uncleanliness, is prominent as a power against good health, and is beginning to attract much attention.

7. Impure Water stands next in rank to impure air as a cause of disease. Both air and water will receive more particular attention further on.

8. Contaminated and Unsound Food.—*Good milk* is, in every sense, wholesome. Bad milk is pernicious proportionate to its badness, and that means a great deal. Many well-defined outbreaks of typhoid fever, diphtheria and scarlatina have been definitely traced to milk which had been contaminated by impure water. Infantile diarrhœa, so prevalent and fatal during the heated months of the year, may often be attributed to milk which has, in some way, become tainted, or soured in badly

kept nursing bottles. Were nursing bottles conscious beings they would have a countless number of sins to answer for; but since they are not conscious beings, who but the mother or the nurse shall answer for those sins of neglect which cut down thousands of the little innocents?

Mothers cannot possibly be too cautious as to the quality of milk their families use; nor milkmen too cautious as to the health of their cows; and the purity of the water with which they adulterate milk, if they will use water for that purpose. Another care, important and often overlooked, is required, to wit: Milk possesses a remarkable affinity for atmospheric impurities. Thus if kept amid foul odors it will soon become tainted, and unfit for use. If kept in the dairyman's house near his children who have scarlet fever, diphtheria, diarrhœa or typhoid fever, it may communicate those diseases to customers. Hence the room in which milk remains even for a short time, should be scrupulously clean, and the air not only free from the "seeds of disease," but *pure*.

Meats.—Too much care cannot well be taken as to the quality of meats. Animals which are to supply this food should not be diseased. Meats are also absorbers of impurities; hence they should be kept in clean places, under the influence of a pure atmosphere. They should not be allowed to taint in the least, nor should they be eaten when too recently killed. The color should not be too red nor too pale; but have that *palatable* appearance much more easy to know when you see it, than to describe.

Pork, before it is used, should undergo a microscopic inspection, and that which is infested by trichina should be discarded. A law in every town should be enacted to ensure this. In the absence of a microscope and of such a law, it is well for housekeepers to cook this much abused and much abusing flesh over a *hot* fire until it is most thoroughly done, and life so often nestling within it extinct.

Shall milk still be watered and often with deadly diseases? Shall alum forever whiten our bread? Sulphuric acid sour our vinegar? Sulphate of copper color our pickles to the beautiful green?

Shall we be compelled to eat all sorts of chemicals, filth, trash, the generators of disease, with no protecting law?

9. The Health of Man as Related to the Diseases of Animals.—This subject deserves, and is at present receiving, the earnest attention of many sanitarians.

The National Board of Health recently invited Professor Law to express his opinion as to what extent the sanitary condition of domestic animals demanded its attention. He enumerated ten contagious diseases which are communicable from animals to men. Of these hydrophobia and glanders are very well known. The others are not so generally understood. 1. Malignant carbuncle may be conveyed in the assorting of horse-hair. 2. The wool-sorter's disease is conveyed by the fleeces to those handling them. 3. Small-pox, and probably diphtheria, cholera, mouth diseases, and typhoid fever are more or less often transmitted to mankind by the lower animals, cats, dogs, chickens, etc. 4. To what extent consumption is transmissible from domestic animals to man is an important question, which will, it is hoped, receive some time a definite answer. 5. Pork-eaters may fear the trichina spiralis. 6. Twenty-two varieties of parasites common to man and animals is a catalogue which may well make our flesh quiver, *not* with delight.

Diseases of animals communicable to man are said to be on the increase, and hence should receive close attention of sanitarians, and the caution and concern of every one.

CONSUMPTION.

Having given a few general causes of disease, and omitted many to be considered under other subjects, let us now turn our attention to a few individual diseases.

First comes consumption, the powerful slayer of thousands of the best and beautiful of the human race. So prevalent is it, especially in the northern and middle latitudes, that one in every seven falls by its keen, insidious blade. Hence the importance

of considering what, if anything, can be done, in the way of escaping so potent and so ruthless a foe.

HOW CAUSED.

1. Over-Study and Over-Work.—Quite too many of our schools are conducted on the high pressure plan. To stimulate students to excessive intellectual effort without enough care to their corporeal well-being is customary but not wise. The competitive examination is made use of to kindle the fires of the grandest ambition. This ambition to achieve success once aroused, pupils, many of them delicate, study twelve hours a day for months together, often in badly ventilated rooms, without physical exercise and bolting their food at meals. What wonder then if, after a while, the appetite begins to fail, followed by weakness, emaciation, and a hacking cough? Thus armed with an education and with those ailments, they go forth to battle with a robust world!

The most robust should not be engaged in actual intent study more than six hours daily, including recitations. The time should be lessened in proportion as the pupil departs from perfect health.

Light, pure air, out-door exercise, so important to every one, are the *more* so to the young, especially to those who have inherited a tendency to consumption. But in the face of this fact, the school-rooms in the city of New York are, it is said, so dark and badly ventilated as to cause more or less nearsightedness to one-third of the pupils. I do not know that the school buildings of New York are behind, in these respects, the average throughout America. If not, is it strange that so many children grow into weakly, sickly men and women, and that one-seventh of all that are born die, sooner or later, of consumption? School-rooms should hence have the most perfect system of ventilation, and the system managed wisely and with eternal vigilance. This does not mean to permit a room to become over-heated, and then throw open the doors and windows so as quickly to "cool off" by a young hurricane.

Windows should be large enough and unshaded enough to permit the room to be flooded with light.

No pupil who has a hereditary tendency to consumption should be sent to a school in which sanitary laws do not receive a most practical consideration. Even then, if health begins to decline, he or she should be taken from school altogether, and given plenty out-door exercise.

Boys, however, are much more inclined to over-play than to over-study. They over-work in their amusements. Many young people have altogether too much the habit of keeping late hours at parties and balls, or reading love-sick stories by the "midnight oil." These, as well as those who subject themselves to excessive mental strain or manual labor, or to insufficient sleep, are preparing themselves for poor health, and many for consumption's merciless invasion.

The knowledge of those causes involves the knowledge of prevention.

2. TRADES.—The pursuit of certain trades, as those in which the workmen are obliged to breathe the minute dust of coal, or of wood, or metal, is very liable to bring on consumption. So is closely confined in-door work of every kind, and especially to those who are predisposed to diseases of the lungs.

Precautions.—Persons inclined by inheritance, or by personal physical organization, to consumption, should not choose a trade in the pursuit of which it is necessary to respire irritating dust; nor any employment which will confine them in-doors. Those who are already thus employed should spend at least two hours daily in the open air: not in standing on street corners, nor sitting on dry-goods boxes, but in some exhilarating exercise. If at any time a persistent hacking cough, dyspeptic symptoms, or emaciation make their appearance, the business should at once be changed for one that will take them much into the open, uncontaminated atmosphere.

In-door employments ought not to be as detrimental to health as they usually are. Employers and builders often have far too little regard for ventilation, and other sanitary conditions, and thus become really responsible for a great deal of the ill health of their workmen. If the common feelings of humanity are not a sufficient force to remedy those evils, they should be regulated by suitable laws, most strictly enforced.

3. CLIMATE.—Climate exerts much influence for or against the development of consumption. It may be stated as a general proposition that the number of cases is less in uniformly warm and dry, or in uniformly cold and dry climates, than where the atmosphere is saturated with moisture, and subject to sudden changes of temperature.

Change of Climate as a Curative.—Home is the best place in the world for one who has marked physical signs of consumption in both lungs; or if one lung only is largely involved. Many such change climate with no better result than to suffer not only from the disease, but also from want of home conveniences and friends. But while change of climate for such may not be advantageous, hope need not essentially be lost. Consumption *now* does not always mean death. Many recover very comfortable health by proper home care, and judicious and persistent use of sanitary means.

To those who feel the approach of the first symptoms of the disease, an immediate change of climate is very often beneficial, and sometimes works like a charm.

When change of place is deemed advisable, a moderately elevated locality, having dryness of soil and of atmosphere, and free from sweeping winds, should be selected. Some parts of Colorado are decidedly suitable for persons from all climates.

The change of location should not, however, consist in a *visit* but in a *permanent residence*, and a *permanent business which will take the patient into the open air*. One may, it is true, be so far improved by a sojourn of only a few months, that he will think himself well; yet if he returns to his former home, the disease will be very liable to recommence with a new energy.

If the patient cannot change his home, the best thing for him to do is to reside on high and dry ground in his own locality; to sleep in an upper room thoroughly exposed to the sunlight; to attend strictly to every hygienic law; to employ a judicious physician who will, without dosing him to death, give essential medicines adapted to his case.

4. COLDS as a cause of consumption.—Every cold has a tendency to leave about the air-passages some degree of imper-

fection. Every repeated cold has a tendency to make the imperfection greater. And the great danger, aside from pneumonia, is that after a while a continuous cough may ensue as a precursor of an irreparable disease of the lungs.

The precaution, of course, is to avoid the causes which produce colds. But that, with some persons, is very difficult or impossible. Many are so sensitive to external impressions, that the least sudden change of temperature, or slightest exposure to a draught, is quite sufficient to set them sneezing. Yet something may be done to prevent it. Without repeating in detail, or undertaking to mention all the precautions to be used, I will just say that one should not only keep dry, and change his clothes immediately if he gets wet; that he should not only adapt his clothing to the temperature of the weather, and know that atmospheric dampness added to a sudden change increases greatly the danger; but he should practically acquaint himself with his power of endurance, and be watchful of his deportment —watchful that he does not expose himself beyond—no, not beyond, but beneath his power of resistance to take cold. Many persons can successfully react from the ill effects of severe exposures, but that is not conclusive evidence that you can. You are your own individual self; formed after the plan of yourself, and must act accordingly, or suffer the consequences.

5. CLOTHING in its relation to consumption. Tight or deficient clothing, deficient on certain portions of the person, and too abundant on other parts, or improper in any way, is often the cause of consumption and other grave enduring diseases. (See subject of Clothing.)

6. FOOD deficient in quantity, or bad in quality; damp houses, or surroundings; deficient exercise in the open air may lead to no less serious results. (See these subjects further on.)

7. MENTAL TROUBLE, or anxiety; despondency; disappointment, and all the depressing emotions, are fruitful mothers of dyspepsia and consumption. (See subject, "The Influence of the Mind upon the Body.")

8. CHANGE OF EMPLOYMENT.—The man who, for example, changes his active out-door life for an in-door life; or the young

man from the country who becomes a clerk in a city store, or a student in school, is liable to become poor in health, which, if unheeded, may grow from bad to worse and end in consumption.

9. Location of a dwelling-house. If a house is located on wet soil; or if the cellar is wet, or if the walls are so constructed as frequently to become damp on the inside, the inmates are far more liable to suffer, than if the house, grounds, etc., were dry. Further on, the sanitary location of the house will be considered.

10. Heredity as a cause of consumption. Should persons marry who are hereditarily predisposed to consumption? A couple should not marry if each have lost father or mother, or both father and mother, from consumption. Those possessing a lesser relationship to this disease (for example, if only one of the couple is predisposed to the disease by inheritance) should not be deprived of marriage. Of course even in that case, and in similar cases, the children which may result from the marriage should be thoughtfully considered, for they may be predisposed to this disease. Such men and women should be considered. They are enjoying fair health. They love with the same fervor that others do who are above suspicion as to disease. Their continued health, or life, may depend upon marriage. Who dare forbid them?

Any man or woman having the disease should not marry. But, as actually happens every day, and will continue to happen, suppose really consumptive couples are wedded and children follow, can anything be done to save those children from the impending fate? In the case of some, the answer must be, *no!* Nothing can effectually be done. With others, the answer is *yes*. Even in the most hopeless cases, it is the imperative duty of parents to do all they can to thwart the pitiless destroyer. With this object in view let the children, from a very early age, partake freely of the open air and sunshine, in all suitable weather during all seasons of the year. Let their sleeping-rooms be well ventilated all the year round, and exposed during the day to floods of sunlight. (See subjects of Pure Air, Ventilation, etc.) Let the clothing be suited to the season, and changed with the atmospheric changes. (See subject of Clothing.) Let their

food be wholesome and nourishing. (See subject, Food, and Food for Children.) Let the time spent in the school-room daily be short. Everything, indeed, should be done that tends to produce and preserve robust health. All parents, consumptive or not, might as well know that such management will not harm the most healthy children.

INFECTIOUS DISEASES, AND HOW TO ESCAPE THEM.

We will use the words Infectious and Contagious synonymously. Small-pox is the most contagious of all diseases; probably measles comes next. These two, together with scarlet fever, diphtheria, typhoid fever, yellow fever and whooping cough are the chief affections which are considered as "catching." Some of these, as small-pox, are supposed *always* to arise from a previous case of the same disease. Others, as diphtheria, probably originate from other causes also, as impure water, contaminated air, and filth generally.

Numerous are the opinions as to the real nature, or essence, of infection. But whether or not it consists of microscopic organisms, existing in the person, which multiply, mature, and die, marking the increase and decline of the disease, it is evidently a *something*, or a *somewhat* exceedingly volatile, that is capable of proceeding from the patient, and infecting the susceptible.

The opinion is common, and as mistaken as common, that all children must sooner or later have the infectious diseases. If sanitary rules, looking to the prevention of these affections, were all understood and strictly obeyed everywhere, the traps of disease and death, and hence these diseases, would, in a score of years, be something that were, but are not. It should never happen, as it often does happen, that parents needlessly or purposely expose their children to contagious diseases, with the idea that they must have them some time, and that it is better they have them while they are young and at home. Nor

should it ever happen, as it is continually happening, that families who are suffering from a contagious disease should thoughtlessly, inexcusably, or wickedly expose others.

"A paper on Epidemics and the germ theory of disease, as read before the American Public Health Association, derives new importance from recent facts which are brought out as to the ability of taming certain malignant infections by the cultivation of the micro-organism in which the infection resides. For instance, Pasteur, by taking the organism of fowl cholera and subjecting it to culture at long intervals, has been able to produce the infection so mildly as that inoculation or vaccination with it causes a very mild disease, which is protective. Prof. Toussaint has done the same as to anthrax. Dr. Greenfield inoculated the blood of a heifer having splenic fever into a guinea pig, and after the disease had occurred in the guinea pig, by the use of its blood in another heifer, produced a mild effect, which was protective. We are not to be too rapid in our conclusions, but we seem to be in the region of great possibilities as to the prevention and limitation of infectious diseases."

A few words concerning the principal infectious diseases, and how to prevent them.

SMALL-POX.

The contagion of this most loathsome disease is so active that it is not only capable of infecting others within the same house, but those in neighboring houses, and even across the street. The dead body may give the disease. The contagion may be transmitted long distances in clothing or in a letter.

Before the immortal Jenner played his successful ruse upon small-pox, it was a most pestilential disease. Dr. Guy, in his work on "Public Health," states that in the year 1796, when vaccination was first found to be a success, the deaths from small-pox exceeded 18 per cent. of the total number of deaths from all causes. That during the last ten years of the past century, its fatality was more than a hundred times greater than that of diarrhœa, and allied diseases. That it spared neither age nor sex. That every fifth person attacked died; and many of those who recovered were disfigured for life. *Now*

the proportionate number who have the disease, and the death-rate are very small; and the cause of the great diminution is not probably the lapse of time, but the magic of *vaccination.* There can be little doubt that if every child were effectually vaccinated, and then revaccinated at stated intervals through life, this terrible malady would almost cease to exist. We hear on every hand mistaken protestations against vaccination. People fear that other diseases will be transmitted to their children, and if contaminated virus is used, the fear is probably not groundless. But the danger is infinitesimal, if virus from healthy heifers only be used. This should always be insisted upon. *Then* that *nameless* disease, which parents so much fear, will far more likely be conveyed to their children by the lips of those having that disease; or by drinking-cups, etc., that they have used. Parents with regard to their children, and young ladies with regard to themselves, should beware of promiscuous kissing, for the kiss of some, even though sweet, is more venomous than the bite of an adder.

The specific preventive measure against small-pox is therefore vaccination, and revaccination. But when a case of this disease exists in a neighborhood, other precautionary measures must be resorted to, to prevent the spread of it. It is not always easy to distinguish the first symptoms of small-pox from chicken-pox, or measles. Hence the physician ought to take the most grave view as to diagnosis, and act accordingly. The patient must, in every case of the disease or of doubt, be most thoroughly isolated. His attendant, if possible, one who has had the disease; or if that cannot be, let him be one who has recently been vaccinated. All the members of the family and near neighbors should immediately be vaccinated.

Other particulars in the way of prevention are similar to those of other infectious diseases, and will be given hereafter.

MEASLES.

This disease, ranking next to small-pox in point of its communicability, is a very prevalent disease, and was especially so during the war of the rebellion. The armies became infected, and from them it radiated all over the land.

Symptoms.—The disease begins in from nine to fourteen days after exposure, with feverish symptoms, sneezing, discharge from the nostrils, watering of the eyes, and cough, which is usually hoarse. The appetite is impaired. There is pain in the head and limbs. The nose bleeds in certain cases.

About the fourth day after the appearance of the first symptoms, the eruption begins, usually first on the temples and forehead, whence it is gradually diffused over the whole body. The rash has, at first, the appearance of minute red pimples, which enlarge, and tend to take a circular form, and coalesce, forming blotches. The color of the eruption is dull red; and its duration from five to eight days, when it disappears, and the patient, if the disease acts kindly, is convalescent.

Uncomplicated measles is not generally a dangerous affection, and needs little treatment. But when a complication arises, as congestion of the throat or lungs, it may become a very grave disease, and require the most skilful medical aid. Then during convalescence, the utmost care should be had that the patient is not exposed to any cause of a cold; for a cold taken at this time may, and often does, lay the foundation of a lasting disease of the bronchial tubes or lungs.

Prevention will be considered hereafter.

SCARLET FEVER.

Though this is an infectious disease, it undoubtedly originates also from other causes than a preceding case of it; as from sewer gas, infected milk, contaminated water, and filth. These unsanitary conditions add very much to its malignancy, even when the disease is "caught" from others.

It is especially a disease of childhood; the chances of taking it rapidly declining after the fifth year, and almost ending after the thirtieth year.

The rash usually appears on the second day after the commencement of the first symptoms of the disease—first in the throat and fauces, then on the neck and face, and quickly spreads over the whole body; declining in from five to six days. It is more diffused, less raised above the skin, and more scarlet than that of

measles. In certain cases, however, no rash makes its appearance on the skin; the intensity of the disease being applied to the throat, often, but not always, making the case one of very great malignancy.

This disease begins with fever, soreness and a rashy redness of the throat or mouth, in from one to ten days after exposure. The coating which at first covers the tongue disappears in from two to four days, generally leaving the surface red, with the papillæ projecting above it, which has much the aspect of a ripe strawberry. This strawberry tongue is characteristic of scarlet fever, as it is not seen in any other disease.

The specific poison which produces scarlatina retains its infecting power for a long time, and may be communicated to others by means of infected clothing, bedding, carpets, wall-paper, etc., the patient himself being probably capable of giving the disease until the peeling of the skin has been entirely completed.

This disease in its mild form is not in itself dangerous, yet its sequels, as acute albuminuria, or dropsy, may be no less frequent or serious than in the severe cases. The malignant form of scarlet fever is, however, full of peril, often proving rapidly fatal under the most skilful management.

PREVENTION.—To save others from taking the disease, let the patient be immediately placed in an upper room, and completely isolated, with his nurse, from all others. Let the throat of the patient be washed out every three hours with the following mixture: Saturated solution carbolic acid 1 part, glycerine 8 parts. Let the patient be bathed daily with warm water and anointed after each bath with a mixture of glycerine and camphor. Lard, or sweet oil and camphor are often recommended for this anointing; but a mixture of glycerine and camphor is greatly to be preferred, because it far less obstructs the excretions from the skin, and answers equally as well for the purpose intended, to give permanent moisture to the skin, and thus prevent the infected particles of cuticle from floating about the room.

The question, "At what time during the disease is the danger

from contagion greatest?" is an important one, but not easily answered. From my own experience, the least danger is at the commencement, and increases as the case progresses, becoming the greatest when the cuticle begins to peel; after which it declines, until the peeling process is completed, when the danger ends. Hence no patient should in any manner approach the well, until after the surface of his body becomes natural, has received a thorough bath, and his clothing washed.

Let these rules be intelligently followed, together with those which are applicable to all contagious diseases, and the spread of this dreaded and dreadful disease may be prevented.

DIPHTHERIA.

This too may be considered a disease of childhood, though it may occur in persons of any age. Its *fatality* is also much greater among children than adults; and usually the younger the child, the more fatal the disease; girls at the age of puberty excepted. *That* is the young miss's tenderest age, and in proportion to her tenderness is she likely to die with this or any other disease.

An outbreak of diphtheria, in its origin and the mode by which it is propagated, is sometimes veiled in the darkest mystery. It may be stated as a self-evident truth that the disease never occurs without an adequate cause, and I unhesitatingly aver that every first case that originates in neighborhoods, originates from preventable cause or causes. Hence it is the business of physicians and the people in *every* case, and especially in every *first* case, to use every means in their power to search out and eradicate that cause; so of scarlet fever. Let us not hug the fatal and mistaken belief that it is Providence that so often and so grievously scourges us; let us know rather that it is the whips of our own neglects and follies.

That contaminated water, impure air arising from filth, are capable of giving rise to this mortal disease *de novo*, there can be no doubt; and when once commenced, those unsanitary conditions do most emphatically have a strong tendency to propagate it and add to its malignancy. Many examples to prove it might

be given, but here I will relate only one. A man for the purpose of making room for a new house, moved his old one over a filthy spot of a swine yard, in which ducks, geese and pigs wallowed even after the house was moved over it. The well stood near. While the family of seven members were living in this old house, the children were taken with malignant diphtheria, three of whom died within a few hours of each other. There had not been other cases of the disease in the neighborhood. A lesson so dear to that stricken family need not cost the reader so much.

There is sufficient reason for believing that milk dispensed by the milkman whose family is having the disease, may give rise to this and other contagious diseases. Let it originate as it may, the fact must ever and practically be remembered that when it once begins, it is infectious.

SYMPTOMS.—More or less fever; aching of the limbs; soreness of the throat; false membrane, and sometimes a shooting pain from ear to throat. The membrane, which makes its appearance within a few hours after the throat symptoms commence, is a whitish or grayish patch, situated on one or both tonsils, which has much the appearance of the thickest cream spread out with well-defined edges. The membrane, small at first, enlarges, and in bad cases often spreads until it covers the entire tonsils and fauces. Sometimes it extends upward into the posterior nares (nose passages), or occasionally downward, making diphtheritic croup; both of which are exceedingly dangerous.

TREATMENT.—This disease has become so general and so destructive to life, that I cannot refrain from speaking a few words as to its treatment: not, however, expecting families who are in immediate reach of a physician to avail themselves of the treatment. So very much often depends on the earliest possible attention, that to those residing far in the country, the medicines I shall name may do much good before the doctor comes. The same treatment will be appropriate for scarlet fever.

The granulated sulphite of soda and the tincture of belladonna are to be administered at the commencement of the disease, as follows: Sulphite soda 1 teaspoonful; tepid water 20 teaspoonfuls; mix and dissolve, and then add 10 drops of the

essence of peppermint or of wintergreen, and sweeten with white sugar or honey. Dose for a child of six years of age is a teaspoonful of the solution every three hours. Prepare the belladonna as follows: homœopathic mother tincture belladonna, 1 teaspoonful; alcohol, 9 teaspoonfuls; mix. Dose, one drop in a teaspoon of water every three hours, to a child of the same age: this will make the two medicines come an hour and a half apart.

Nothing sour should be swallowed while taking the sulphite of soda.

The patient should swallow, every hour, half a teaspoonful of solution of salt in water.

Let a piece of salt pork be dipped in hot vinegar, and sprinkled over with black pepper, and worn around the neck. Or 20 drops of the following mixture applied on neck over the region of the tonsils twice a day till pimples appear thickly, to wit: croton oil, 1 drachm; organum oil, 4 drachms; mix. In case the neck becomes badly swelled, cloths applied wet with the strongest solution of sulphite of soda often act like a charm.

The throat should every three hours be washed with the following solution: saturated solution carbolic acid, 1 part; glycerine, 6 parts; mix. Apply with a short, thick camel's hair brush.

A tendency to paralysis of the heart is, in bad cases, one of the most frequent and dangerous of symptoms, which must receive the earliest attention. Hence the pulse must be closely watched from the first, and if it becomes feeble or irregular, the belladonna is to be discontinued, and phosphorus alone, or phosphorus mixed with nux vomica, is to be given. The sulphite of soda to be continued for a short time longer. Prepare the phosphorus as follows: 1 drachm of the homœopathic tincture of phosphorus; 9 drachms of alcohol; mix. Dose, 1 drop every three hours to a child of six years of age—to be increased or diminished according to the age of the patient: 4 drops being sufficient for an adult. If this alone does not, after a few

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NOTE.—How to graduate doses for children: For children under 13 years of age, add 12 to the age, and divide by the age. Thus child of 6 years add 12 = 18 ÷ 6, the age, = 3; or ⅓ of an adult dose.

doses, improve the heart's action, the nux vomica may be prepared in the same way, and added to the phosphorus in the same doses. In cases of coma, the same remedies are to be used as in weakness or irregularity of the pulse. For heart failure from any cause, *cactina pellets* is a remedy of superior value. But skilled electric treatment will remove the cause of threatened heart failure and prevent future danger.

The best nourishment in this, as in most other acute diseases, is milk, and its preparations with oatmeal, flour, etc.

The indications for the use of whiskey in this as in other diseases are cold extremities, pale face, weakness or irregularity of the heart's pulsations; and sufficient should be used to destroy those symptoms of danger.

Besides the remedies already named, if croupy symptoms appear, I am much in favor of inhalations of iodine, prepared and used as follows: iodine, 30 grains; alcohol, 1 ounce; mix. Turn half a teaspoonful on half a cup of boiling water, or of lime water, hold the cup under and near the mouth of the patient, and let him breathe the fumes as they rise from the cup for a few minutes; to be repeated from every half hour to every three hours, according to the urgency of the croupy symptoms.

Notwithstanding that many celebrated physicians have little confidence in sulphite of soda (probably because they never used it, or else depended entirely upon it), I can aver on the evidence of much experience with diphtheria, and with the remedy, that it is of the utmost value, and especially during the first stages of the disease, and as a preventive.

Nothing will so sustain the action of a faltering heart, relieve a dangerous prostration of the nervous centres, and keep the patient alive till the disease passes, as *phosphorus* and *nux vomica*, *cactina pellets*, and especially *electricity*.

PREVENTION.—The greater part of the suggestions under this head will apply to other contagious diseases also.

It would seem needless to say that *everything* ought to be done in the way of preventing this most fearful malady. Were we to judge by the actions of many families, we should

naturally suppose that diphtheria is a very innocent thing. Many parents will, while the disease is raging in all malignancy in their homes, permit their well children to play with other children; will themselves go about their business with others as usual; will expect all their neighbors to assist in caring for their sick; and in case of a death, will insist on holding a public funeral, and are grieved if the funeral is not well attended by men, women and children! All this should not be. To do it wilfully for the purpose of spreading the disease is villanous; to do it thoughtlessly, deserves the severest censure; to do it through ignorance, is inexcusable—inexcusable because no one has a prerogative to live in ignorance of the ordinary laws of health.

Every family in which exists an infectious disease should have regular attendants; and neither the attendants nor themselves should mingle in *any* degree with the well, or expect others to mingle with them. Perfect isolation of the patient, family and nurses should be maintained. Nothing less should be permitted. I believe in extending sympathy and aid to the sick under all reasonable conditions, but I do *not* believe it is the duty of everybody needlessly to expose themselves and their children to a contagious disease.

In the way of medicine, the sulphite of soda is an excellent preventive of this disease and of scarlet fever. In families of which some of the members were ill, I have many times prescribed it for the well with much satisfaction, as in every case those who have persevered in taking the medicine have either escaped the disease altogether, or had it in a mild form. Dissolve 1 teaspoonful of the granulated sulphite of soda in 9 teaspoonfuls of water. Dose for an adult, a teaspoonful three times a day, between meals; giving children less according to the age.

Let those who are well rinse out their mouth and throat before each meal with the following mixture: chlorate potass., 4 drachms; saturated solution carbolic acid, 1 drachm; glycerine, 4 ounces; water, 1 pint; mix. A strong solution of salt in water is very good.

Small cloths, instead of handkerchiefs, should be used about the patient, and burned soon as used.

No one should kiss or take the breath of one who has diphtheria or scarlet fever. A child who has had either disease should be kept from school, and from playing with other children for at least two weeks after recovery.

WHOOPING COUGH.

This, another of the plagues chiefly peculiar to children, commences so much like an ordinary cold, that even a skilled physician cannot always, at first, make a correct diagnosis. After a week or two, however, the characteristic convulsive cough, followed by the whoop, begins, which is sufficient to distinguish this from all other diseases.

The chief dangers of this affection are not the affection itself, but its complications and sequels. The principal affections which may complicate it are bronchitis and pneumonia. Its chief sequel is consumption. Hence the great precaution which it is necessary to use during and for weeks after the complaint is to avoid the causes of colds.

There seems to be nothing that will prevent the disease when it is epidemic, except non-exposure—not then always successfully.

TYPHOID FEVER.

Simple remittent fever, if intense, is often, in the West, called, or miscalled, typhoid fever. Especially is this true when it takes on certain symptoms denoting the typhoid state.

True typhoid fever is probably infectious, and propagated from a case or cases of the same disease previously existing. It may undoubtedly *originate* from sewer air, contaminated water, polluted milk, and filth generally. That this affection may receive its origin from bad water is shown by many incidents. The following are to the point: a man was travelling on a stage coach in western New York, who, when reaching a small village, became so ill that he was obliged to stop at a tavern. There he was sick and died of typhoid fever. In the course of a few days, new cases of the disease made their appearance, and soon every

house, except one, in that part of the village was invaded. All the families except that one used water from the tavern well The well had, it was afterwards found, become contaminated; and the contamination probably consisted of the discharges from the first patient, which through negligence had percolated into the well. There had not been a case of typhoid fever in that village for many years before the coming of the stranger.

The following came under my own observation, in my own practice. Two of an esteemed family consisting of four adults and a child, residing in the country, were nearly at once taken with typhoid fever. The third, after a short time, was stricken down. The fourth had strong symptoms of the disease, which, after some treatment, passed away. The child escaped.

The location of this home is a healthy one. No cause could be found for the outbreak of this grave disease, except the unfiltered cistern water, which had for some time been their drinking water, and which, on analysis, was found to be saturated with organic impurities. That this water was the specific cause is further evidenced by the fact that there had not previously been a case of the disease in the neighborhood, and none of the members of this family had been exposed from others.

Another case is as follows: a young man was plowing so far from home, that he ate his dinners in the field, and drank water from a swamp, for many days in succession. He came home ill; and the illness proved to be typhoid fever of the most malignant type. He died. Other members of the family were in a few days taken with the disease; they all recovered. Another family, consisting of three adult members, lived near neighbors to the above, and assisted more or less in caring for the sick of the first family. Soon after two of the three were taken ill with the same disease; one of whom died, and the other recovered. These were the only cases of the disease which ever had been in the neighborhood. So much for contaminated water as a cause of typhoid fever.

Many cases might be cited to prove that sewer gas is capable of originating typhoid fever: among which the fatal outbreak at Princeton College, New Jersey, is a fair example.

PREVENTION of typhoid fever chiefly consists in seeing that your house-drainage is properly constructed and kept in complete order. That your drinking water is free, or nearly so, from organic impurities. (See these subjects further on.) That yourselves and everything about you are clean. The infectious diseases have a strong affinity for filth and filthy persons. When there is a case of typhoid fever existing in a neighborhood, such precautionary measures as the following should be used in the way of preventing the spread of the disease: 1. Complete isolation of the patient. 2. Immediate disinfection of all discharges from the patient and of all soiled clothing. 3. Immediate burial of all excreta at a distance no less than two hundred feet from the well of drinking-water. 4. The most perfect freedom from filth everywhere.

CHANNELS OF INFECTION.

Before closing the subject of infectious diseases, it is well to say something as to the channels of infection, and as to the chief precautionary measures to be pursued when an infectious disease actually exists.

First. It should be kept in mind that these diseases *are* infectious; hence that susceptible persons should not needlessly enter the sphere of their influence.

Second. Persons who have in any way recently been under the influence of any of these diseases should not needlessly expose themselves nor be permitted to expose others.

Third. Since such diseases as scarlet-fever, diphtheria and measles often receive their chief nutriment at schools, since indeed the schools are their great distributing offices, by which they are everywhere spread, it becomes reasonable that the schools should, at the outbreak of any infectious epidemic, be closed and the severest isolation insisted upon. Instead of closing the schools, parents are often permitted to send as usual their children who have an infectious disease lightly, and those who have had the disease sufficiently severe to keep them at home are allowed again to return to school as soon as they are fairly convalescing; a general and fatal sweep of the pestilence

is often the consequence of the folly. No person who has had measles, scarlet-fever or diphtheria should attend school, or otherwise associate with others in less than two weeks after recovery, and not then unless the skin has become perfectly natural, the child thoroughly bathed, and the clothing washed.

Fourth. When a member of a family is attacked by an infectious disease, he should be placed in a separate and upper room, which should be kept at a comfortable temperature, well ventilated and well exposed to the sunlight. No one should be allowed to enter the apartment except the attendants, and the attendants should not associate with others in or out of the family without an entire change of apparel.

Fifth. All discharges from the mouth or nostrils of the patient should be received on cloths, and the cloths immediately burned. All discharges from the bowels and kidneys should be received in a vessel containing a strong disinfectant, as saturated solution of carbolic acid, or solution of per manganate of potass. These discharges should be immediately buried no less than two hundred feet from any well of drinking-water.

Sixth. A tub containing a solution of carbolic acid and water should receive the bed and body linen, and the linen immediately taken from the room, but not from home, and washed.

Seventh. The nurse should wear a loose over-gown and tight-fitting cap, which she should lay off before leaving the room.

Eighth. The patient should have separate dishes, which should be washed with a saturated solution of carbolic acid and thoroughly rinsed before they are used by others.

Ninth. All articles which cannot be disinfected or washed should be burned or buried.

Tenth. Those who are well in a family where an infectious disease exists, should not associate with others out of the family.

Eleventh. The well children should be kept entirely apart from the ill in dry, light, well-ventilated rooms. If diphtheria or scarlet-fever is the disease, their throats should be watched, and if the first symptoms of the affection appear, they should receive immediate attention.

Twelfth. No child should be allowed to kiss one who has sore throat, nor sleep in a room recently occupied by a person having sore throat, nor use toys or handkerchiefs which such have used.

Thirteenth. No filth of any kind should be allowed in or near the house; cellars should be kept clean and disinfected; the house-drains properly constructed and kept in perfect repair; the drinking-water pure.

Fourteenth. In case of death no public funeral should be had.

Fifteenth. After the disease is ended, the furniture, floor and walls of the apartment in which the sick have been, should be washed with carbolic acid and soap; as also the bedding and wearing apparel. Then the room should be tightly closed and sulphur burned in it, at the rate of a pound of sulphur for every hundred cubic feet the room contains. Two days are not too long to keep the room closed—two weeks not too long to ventilate it after the fumigation.

MALARIA—INTERMITTENT FEVER, OR AGUE—REMITTENT FEVER.

Ague and remittent fever are the principal fevers of the West, and of many parts of the South, and are caused by malaria. Malaria itself, we know, is a specific volatile poison which produces these diseases; but of what it is really composed opinions differ. At any rate, certain *conditions* are necessary for its generation. One of those conditions is moisture: thus, it is often called marsh miasm. Another is heat. It is seldom active at a lower temperature than 60°, and its operations are *sealed* at 32°. Vegetable decomposition intensifies, even if it does not originate malaria. Thus in Iowa, during the years that a great deal of prairie was being plowed, ague and remittent fever were *rife*. Countries in which the land is low, level and swampy, and the atmosphere humid, are especially liable to malarious diseases. And the hottest and driest years are generally, in those places,

the most sickly; and the hotter and drier the preceding summer, the more abundant and fatal are the autumnal fevers.

PREVENTION.—1. In malarious localities, exposure to the outdoor air is much more unsafe during the early morning, evening and night, than during the day.

2. It is particularly unhealthy in the vicinity of marshes. Hence such places should, if possible, be shunned.

3. Malaria is most intense near the ground; and intenser still in low places, as in ravines; and especially so at night. Therefore the sites for dwelling-houses should be chosen on the highest land; and sleeping-rooms situated in the upper story of the house.

4. Malaria is wafted by the wind, and the winds mostly blow from certain directions during the summer. Hence residences should be so situated as to low, marshy, or unhealthy spots, that the miasm may be blown *from*, not *towards*, houses.

5. Many instances have demonstrated that a body or stream of water *absorbs*, and in a measure destroys the noxious properties of miasmata, in the passage of the latter over it. They have also demonstrated that the immediate shores are especially insalubrious.

6. The foliage of trees seems to attract and accumulate malaria. It is therefore injudicious in malarious localities to remain, and especially to sleep, long under trees. But this property of accumulation probably may be made a source of protection, by surrounding residences with shade trees, but at safe distances.

7. It is safer to remain in the house until after breakfast.

8. When ague or any other malarial fever is prevailing, quinine in a three-grain dose every morning is, in addition to the preceding precautions, an effectual preventive.

DIARRHŒA AND DYSENTERY OF CHILDREN.

There can be little doubt, to a close observer, that teething is far less a source of these diseases than many parents imagine. When the system of the child is allowed to become deranged,

then teething may indeed greatly aggravate the derangement. But the process of dentition is a process of nature; and nature is not so impotent as to make the operations of her laws difficult; and they are not difficult in this case only when the faults of parents make them so.

The more prolific causes of these complaints are improper feeding during the heated term of summer; sour nursing-bottles; polluted milk; bad air, from whatever source; and illy regulated clothing. All that parents need do in the way of preventing gastric and intestinal affections, which blot out the lives of so many of our little ones, is to avoid the causes which produce those diseases. (See the "Physical Management of Children," further on.)

Now having given a few hints as to the causes which produce, and the means by which to prevent *general* sickness; and *special* hints as to the causes and prevention of some special diseases which prevail in temperate latitudes, we will pass on to those topics which also have an intimate relation to health. We will begin with Food and Drink.

FOOD AND DRINK; AND THEIR RELATION TO HEALTH AND DISEASE.

Every organ and tissue of the body is continually undergoing disintegration, or waste. Food and water are required to repair the waste.

THE PROCESS OF NUTRITION is as beautiful as wonderful. Yet the idea that, in order to sustain that nutrition, we are obliged to eat coarse food, a great proportion of which is itself a waste, is, in a certain sense, rather humiliating to our finer conceptions, and our higher natures. In some respects the trees, and even the vilest weeds are our superiors, since by the subtile force of elective or *selective* affinity, they separate from the gross the requisite nutriment and that alone, assimilate it, leaving the unassimilable in the bosom of mother nature.

Could human beings sip of a semi-spiritual viand capable of imparting perpetual youth, the broadest and best humanity, and eternal life—*this* would be the evolution of my ideal man. But as the evolution of these excellencies must come in a far different sphere of existence, we must conform to the present. If the temple in which dwells the human soul is gross, the soul itself may be celestial. Hence for the soul's sake, that temple should receive considerate usage, and close circumspection.

Charles Dickens, to represent one of a class, tells us of an abstemious young lady, who, at her meals, always insisted that she had eaten *very* heartily, when in fact she had hardly tasted food. But when taking her by surprise, he found her eating with the children most voraciously, he came to a reluctant conclusion that she was not a full-fledged angel after all.

However vulgar the act of eating may be, it is in this world quite a necessary vulgarity. *What*, *when*, and *how*, to eat and drink, are also essentials to health, but disease and death are in these things perverted. A healthy, vigorous youth may sometimes, it is true, be as imprudent as possible in regard to his diet for many years together and without seeming harm; yet in almost every case, the steady trend is toward disease, or a preparation for disease's armed invasion.

HOW TO EAT AND DRINK—THE DIGESTION OF FOOD.

The process of eating is a very simple one, and as we spend an hour or more in partaking of our food, each day of our lives, it would seem that lessons in this department of human activity are quite uncalled for. To convince us, however, that the average child or adult knows little about this matter except the mere and half performed mechanical part of it, we have only to remember the million or more of American dyspeptics. Dyspepsia is not the normal state of man, and hence must have a cause. That cause may be found in the dining-room.

Saliva.—It is the function of the teeth to masticate food. During the process of mastication, the food is moistened and reduced to a condition for swallowing. To supply the necessary moisture, the mouth is provided with glands, called the salivary

glands, which when excited by the presence of food in the mouth, and by the act of chewing, throw out saliva, the quantity of which, in health, is nearly in proportion to the amount and dryness of the food taken.

The saliva moistens the food, but why is it not as well to moisten it with a swallow of water, tea, or coffee, as many are in the habit of doing? There are two very important reasons which should deter all from so doing. The first reason is, no drink can moisten and soften food as efficiently as does saliva; and second, the natural secretions of the mouth act upon and pass the aliment through the first process of digestion, especially the starchy foods. It follows that the act of eating should be performed very slowly, so that every mouthful will be thoroughly and minutely mixed with the saliva, and with the saliva alone. No extra time is given to meals that is not many times regained by the eater in the way of better health and greater energy and vivacity.

GASTRIC JUICE.—As soon as nutriment is swallowed it excites the secretion of the digestive fluid of the stomach. That digestive fluid is called gastric juice. Unless too much food is taken into the stomach, the gastric juice continues to flow as long as one, who is in health, continues to eat, and mixing with the food, reduces it to a soft, pulpy substance called chyme, which completes the second stage of digestion.

THE PRINCIPLES here involved deserve strict attention: 1. The food must be ground by the teeth very finely, or the gastric juice either fails to digest it at all, or slowly, and with difficulty. 2. The nutriment taken should be such as is digestible by the person who takes it. 3. No more food should be eaten than the body needs, or the quantity of gastric juice which the stomach is capable of secreting will be insufficient to perfect digestion; and for other reasons which will appear further on. How is one to know the quantity of nutriment the body needs? Simply by eating slowly, and when the sensation of hunger is gone, *stop*. A healthy stomach is a safe monitor in this respect. The stomach is likewise generally a safe guide in disease. Thus when one is ill the appetite generally deserts him because his digestive organs

are not in the condition to digest food. Yet in some exhausting diseases the system must be supported by fluid nourishment, appetite or no appetite. 4. The process of digestion requires the natural heat of the stomach. Actual experiment has demonstrated that cold gastric juice either acts not at all on food, or else very inefficiently, according to the degree of coldness. Iced water, ice cream, ice tea, and ices of all kinds have become the fashion. Followed recklessly, the fashion is dangerous to health. Why? Because the stomach has countless arteries, veins, nerves, and a delicate mucous membrane, studded all over with the glands which secrete the gastric juice. It is, in every way, very highly organized, adapting it to perform its important functions. The action of this as well as that of every other organ requires not the absence nor an overabundance of blood, but just enough to meet the wants of digestion. Hence food fails to digest if the blood is expelled from the stomach, and it *is* thus expelled from the stomach by the application of cold to its mucous membrane. Food also fails to digest when the blood-vessels are *over*-distended, and they are over-distended after reaction sets in, from the bloodlessness caused by the application of cold. This over-distention not only arrests the process of digestion, but often causes serious congestion of the stomach. It therefore appears that iced drinks, and the ices are detrimental to health when taken just before, at the time, or immediately after meals, and that warm drinks and warm food are therefore to be preferred. The injurious effects of cold food have often come under my observation. The following marked case illustrative of this is now under treatment. Mr. S. has always until within a few weeks been in every way an unusually robust man, whose digestive organs have been so perfect as to make him unaware of the digestive process. Or, in other words, so perfect that he was unconscious, so far as his sensations were concerned, that he had any digestive organs. For several months he has eaten cold dinners; and for several weeks past he has suffered from the horrors of dyspepsia. 5. Fluids taken at the time of meals dilute the gastric juice, making its digestive powers for a time defective; but since liquids generally pass out of the stomach

within a short time, it is probable that the taking of a moderate quantity of fluid during meals is not particularly harmful, providing always that the fluid be not used to moisten and wash the food down. The most appropriate time to drink is undoubtedly just after the digestion of a meal is completed—two or three hours after eating.

CHYLE.—When food is converted into chyme by the gastric fluid of the stomach, the digestion is not yet completed. It must pass through another process, which we will now explain. The right extremity of the stomach opens into the intestinal canal. The orifice of that extremity is surrounded by a strong muscle which is capable of effectually opening and closing it. That muscle, as if it possessed consciousness, has a strong tendency to refuse to open the orifice for the purpose of giving passage to food until it is converted into chyme, but it opens freely for the chyme. On passing out of the stomach into the portion of intestine just below, called the duodenum, the chyme comes into contact with the juices—bile and the pancreatic juice—which convert its nutritive elements into chyle, a substance fit to enter into and become a part of the blood. This completes digestion.

CIRCULATION.—As the chyle is yet in the intestine, let us explain how it finds its way into the blood. The inner lining of the intestinal canal is filled with numberless tubes, the minute branches of which are microscopic. These tubes are called lacteal absorbents; the small branches of which unite and reunite again and again until they form one large tube—the thoracic duct. The thoracic duct directs its course upwards in proximity to the spine (back-bone) until it reaches the upper part of the chest, where it opens into the great vein—vena cava—which empties its contents into the right side of the heart. The function of the thoracic duct is to conduct the chyle as it is formed in the intestine to the above-named great vein, which in its turn conveys it to the heart, whence it circulates as blood through the whole system. The part of the food which is useless is excluded, and passes away through the abdominal canal.

PLEASANT CONVERSATION during meals, providing it does not intrude on the proper mastication of food, aids digestion. No

one should partake of a full meal when he is very sad or angry, or when under any other depressing or violent emotion.

Violent Exercise of body or mind should not be taken just before or just after a full meal. An experiment made by John Hunter shows the effect of violent exercise after eating. He fed two dogs equally, sent one immediately out to run after a hare, and permitted the other to lie down and rest. Both dogs were killed at the end of an hour, when the food in the dog's stomach that had rested was nearly digested, and almost unaltered in the dog that ran. Half an hour of quiet rest, or of rest and cheerful conversation, after meals is earnestly recommended.

WHAT TO EAT AND DRINK.

The need of nourishment, as before hinted, arises from the continual waste to which every part of the body is subject, and from the continual renewal which the waste demands. So constant are the waste and renewal, that no part of the body is exactly the same to-day as a week ago. Some of the particles, or molecules, of which you are composed, are every moment wearing out—consuming, if you please—and conveyed from you through the skin, lungs, kidneys, etc.; and new molecules are every moment forming through the wonderful laboratory of the organism from the food you eat.

All parts of the organism are not nourished by the *same food;* in the light of which we are, for a moment, led to consider the constituents of foods.

The Constituents of Foods may be classed as follows: First, the nitrogenous; as meat and eggs. Second, the oleaginous; as butter, lard, and all animal fats. Third, the saccharine; as sugar. Fourth, the farinaceous; as all starchy foods, such as potatoes, bread, etc. Many kinds of foods contain several or all of the constituents in varying proportions.

The nitrogenous foods especially nourish the muscles, though they also contribute to other purposes in the animal economy.

The oleaginous articles are heat-producing, or are burnt in the system during the process of respiration, thereby furnishing the warmth of the body.

The saccharine and farinaceous foods also contribute heat, but in a less degree than the fatty. They all generate animal force.

Water constitutes about two-thirds of the weight of the whole body. It assists in dissolving and conveying food to its proper destination; to remove the waste material from the body; to equalize by evaporation the temperature of the body; to regulate certain chemical changes which attend the disintegration and the nutrition of the tissues; etc. Water is therefore as essential to life as food.

The composition of the human body is such as to require water and all the constituents of food included in the classes named, varying in quantity and proportion in accordance with the person's age, employment, condition, etc. A healthy adult, leading an active life, probably requires on the average, every twenty-four hours, about a pound of nitrogenous foods, such as meat and eggs; about two pounds of farinaceous compounds, such as bread and potatoes, and one-fifth of a pound of the oleaginous, as butter, etc.; and a little sugar or the sweets. Different persons under different conditions need different quantities and different proportions, as above stated. For examples, an idle man perhaps requires one-fifth less than an active man, and a woman still less. *The temperature* of the human body must be maintained at about ninety-eight degrees during all the seasons of the year. Since in winter we have to contend with the external cold, it follows that we need more heat-producing food to sustain that normal temperature, than in summer; just as it requires more fuel to sustain the adequate heat of a room in cold, than in warm weather. Therefore if during the winter we have been freely partaking of fat meats, Indian bread, buckwheat cakes, sugar, butter, and such other articles that are rich in fat or sugar—that is to say, heat-producing foods—then at the approach of warm weather we should use less of such foods, and more of the non-heat-producing, such as lean meats, vegetables, moderate quantities of wheaten bread, fruits, berries, fish, etc.

How does a too abundant use of heat-producing food affect the system? It impairs the blood by giving it an excess of

carbon, which condition often produces feverishness, fevers, inflammations, dyspepsia, etc.

The morning meal should consist of one-fourth of the meat of the day, and two-sixths of the starchy nutriment. Dinner, the remaining three-fourths of the meat, and another two-sixths of the farinaceous articles. Supper, the other two-sixths of the farinaceous foods.

The saccharine materials, or sweets, may form a small part of each meal—more in the winter than in summer; and the same may be said of the oleaginous articles, as fat meat and butter.

If one eats too little food, the system suffers, because the waste of the tissues is not repaired. If one uses too much food, the system suffers, because too much work is given for the organism to do. If a proper proportion of the constituents is not used, the body or health also suffers, because certain parts of the organism are properly nourished, while other parts are not. Hence the importance of knowing how much to eat, what to eat, and in what proportion.

Vegetarians tell us that all the needful constituents of foods are supplied by the vegetable kingdom, and that therefore animal food is entirely unnecessary. The first clause of the proposition is true; the last clause will bear a moderate amendment, for the flesh of animals is vegetable food *elaborated*—or vegetable food reduced for us to bones, muscles, nerves, brain, etc., rendering as a rule the interchange from beast to man far less difficult, than for man to reduce vegetable materials for himself, and to transmute them into tissue.

In this connection, the following table taken from Dr. Letheby's work on Food, may be made of great value. It is called a table of Alimentary Equivalents. The equivalents have been calculated as to the amount of nitrogen and of carbon contained in the different articles of food. The uses of nitrogen in food have already been explained. The carbonaceous foods, from which the carbon is derived, consists of the heat-producing foods—that is, the farinaceous, oleaginous, and the saccharine articles; the uses of which have also been explained. The equivalents are given in grains per pound of the foods named,

from which the reader may calculate the total amount of nitrogen and carbon his daily food contains.

Before giving the table, let me say that, according to experiments made by many able observers, the man who is idle requires that amount of food daily, which, upon analysis, will yield 180 grains of nitrogen, and 3,816 grains of carbon; the man who is occupied in ordinary labor, that amount which will yield 307 grains of nitrogen, and 5,688 grains of carbon; and the man who is engaged in active labor, 391 grains of nitrogen, and 6,823 grains of carbon.

Now it will be seen that the cook can easily choose such articles from the following table, in such proportions as to make the daily food, as to its necessary constituents—to wit, the nitrogen and carbon—correspond approximately to the wants of the system, as mentioned above; varying those constituents somewhat according to the condition of health, appetite, age, temperature of the weather, etc.

Table of Grains per pound of the Food named.

	Carbon.	Nitrogen.
Peas	2,699 grs. per pound.	248 grs. per pound.
Indian Meal	3,016 " "	120 " "
Oat Meal	2,831 " "	136 " "
Baker's Bread	1,975 " "	88 " "
Rice	2,732 " "	68 " "
Potatoes	769 " "	22 " "
Turnips	263 " "	13 " "
Green Vegetables	420 " "	14 " "
Carrots	508 " "	14 " "
Parsnips	554 " "	12 " "
Sugar	2,955 " "	0 " "
Molasses	2,395 " "	0 " "
Butter Milk	387 " "	44 " "
Skimmed Milk	438 " "	43 " "
New Milk	599 " "	44 " "
Cheese	1,947 " "	483 " "
Mutton	1,900 " "	189 " "
Beef	1,854 " "	184 " "
Fat Pork	4,113 " "	106 " "
Dry Bacon	5,987 " "	96 " "
Green Bacon	5,426 " "	76 " "

	Carbon.	Nitrogen.
White Fish	871 grs. per pound.	195 grs. per pound.
Red Herrings	1,435 " "	217 " "
Suet	4,710 " "	0 " "
Lard	4,819 " "	0 " "
Salt Butter	4,585 " "	0 " "
Beer and Porter	274 " "	1 " "

It will thus be seen that a man in active labor, if he would live on beer alone, would need to drink 391 pounds daily, to make the 391 grains of nitrogen he daily requires! not a very nourishing beverage; and about 25 pounds to make the carbon he needs. He would require about 18 pounds of potatoes daily to make the requisite amount of nitrogen; but a little less than 9 pounds to supply the requisite 6,823 grains of carbon. Hence if a man were capable of eating a sufficient quantity of potatoes to supply the necessary amount of carbon to support the warmth of his body, there still would be insufficient to supply the requisite amount of nitrogen to adequately support his muscular system. Therefore, man had better not undertake to live on potatoes alone.

If we take baker's bread we shall find that he will need nearly 4½ pounds to make up his 391 grains of nitrogen; and about 3½ pounds to make the 6,823 grains of carbon. Bread, then, contains carbon and nitrogen, in nearly the requisite proportion, to supply the animal heat, and to nourish all the organs of the body. Hence bread is indeed "the staff of life."

If the active man would live on new milk alone, he will need about 9 pounds daily to make up his 391 grains of nitrogen; and a little more than 11 pounds to supply the 6,823 grains of carbon. Therefore, milk, too, may, with equal propriety, be called "the staff of life." It would seem, therefore, that if bread be added to the milk so as to reduce the *quantity* of nourishment a man needs, we should then have a most appropriate food. Experience reduces the *seeming* to a fact.

A pound and a half of butter would furnish sufficient carbon for the daily wants of a man, but not a particle of nitrogen. Butter then is a starvation food: chiefly valuable as a supporter of animal heat.

A trifle over 2 pounds of lean beef will furnish the 391 grains of nitrogen; but it will take about 3⅔ pounds to yield the 6,823 grains of carbon, so that the nitrogen and carbon in beef are not proportionate to the needs of the system, and therefore one or more other articles must be added to make an appropriate meal.

Since less carbon is required in summer than in winter, white fish is an appropriate summer meat.

All these figures may be exceedingly dry to the reader, but if the reader will patiently study them, and if the cook will put the knowledge gained into practice, then the study and the practice will be of much worth. The haphazard eating to which people are so thoughtlessly addicted often under-nourishes certain tissues of the system, and over-nourishes others: a starvation on the one hand; a satiety on the other. The result is, as might be expected, an early disease, and failure of certain organs of the body, and premature death of the individual.

While the cook is not always expected to weigh on the scales every article of food before she cooks it, she *should* be expected closely and practically to study these things, and to accustom her eyes, and her hands, and her brain to weigh, and proportion the food she prepares for the table, which, when taken in the aggregate, will yield the amount of carbon and nitrogen, proportionate to the needs of the human system. She can figure for herself from the table of alimentary equivalents. Thus, for example, if each person be daily allowed ¾ of a pound of beef, 1½ pounds of bread, 1 pound of potatoes, 2 eggs, 1 pound of green vegetables, a little butter, and milk, she will find in the aggregate about the proportion of nitrogen and of carbon which is needed by an active adult. The proportion of these constituents should be varied a little according to the temperature of the weather, etc., as has been stated on a preceding page. The quantity which will be eaten will of course vary with different persons.

Any woman who is not denied the privilege of scientific instruction on these subjects is not excusable if she is a poor

cook; and she *is* a poor cook if she does not provide for the table foods containing the constituents in requisite proportions for the adequate support of every organ of the body. I regret that this is not all of bad cookery. Two great faults are the too greatly concentrated aliment, and so much compounding as to make the food's perfect digestion beyond the power of an ordinary stomach. With all this, many young people voraciously bolt almost everything known to culinary art, or to culinary folly, and boast of it, while they scoff at careful eaters. Dyspepsia will, in after years, tell the tale of their error, even if immediate punishment does not.

Our breakfasts, dinners, and suppers should consist less of shot-gun prescriptions; should have more of bulk, and more of simplicity. We need more of bread and milk, oat-meal mush, Graham bread, beef, chicken, fish, fruits, and vegetables; and less pies, cakes, compounded puddings, sausage, pork, and candies.

One hint as to unbolted flour bread, or Graham bread. Many are accustomed to prepare it, and the other palatable preparations which this flour is capable of making, without sifting the flour. The external integument of a kernel of wheat is too harsh to be innocent to many human stomachs. Therefore before it is used, the flour should be sifted. Even then, if the bowels of the consumer are constipated, notwithstanding the use of unbolted flour preparations, these preparations should be discontinued, since an unpleasant and sometimes a dangerous quantity of bran may accumulate in and obstruct certain portions of the intestinal canal; several cases of which have come under my own observation.

Other faults with many house-wives are want of economy, a great variety of poor cookery, tempting the appetite with numerous highly seasoned dishes, sameness in dishes from day to day, want of scrupulous cleanliness—these are some of the qualifications (?) of far too many wives and cooks of American homes. That all food should be so cooked as to be both palatable and wholesome is self-evident. Good cookery is indeed one of the greatest needs of the world; and the man or woman

who will learn it and teach it to the world deserves immortality among men. Suitable books on scientific cookery, if studied and practised, would do a vast amount of good in this direction; but unfortunately few of the works on this subject are, in any sense, scientific. Authors of cook books either do not understand the subject on which they write, or, understanding the subject, and practised, perhaps, in wholesome cookery, they yet wish to please a luxurious world and to teach their readers to make highly *genteel* dishes, which shall tickle epicurean palates, even at the expense of health. They make their system too complex, useless, and injurious in a sanitary point of view.

> "Ah! little they know of true happiness,
> They whom satiety fills,
> Who, flung on the rich breast of luxury,
> Eat of the rankness that kills."

Is there not some woman or man, who is capable of preparing palatable and healthy food for the table, that will take an independent stand in the cause of humanity, and write a book, the formulas of which, when reduced to practice, will make food savor much more of health, and much less of dyspepsia and of death?

In about the year 1822 a young soldier's stomach was laid open by a gun-shot wound, which gave Dr. Beaumont a long and favorable opportunity to watch the food during the process of digestion.

The mean time required for the digestion of various articles of food is shown in the following table, as given by Dr. Beaumont:

Articles.	Preparation.	Time Hours.	Time Mins.
Apples, sour, hard	Raw	2	50
" " mellow	"	2	
" sweet "	"	1	30
Barley	Boiled	2	
Beans, pod	"	2	30
Beef, fresh, lean, rare	Roasted	3	
" " " dry	"	3	30
" steak	Broiled	3	
" with salt only	Boiled	3	10

Articles.	Preparation.	Time. Hours.	Mins.
Beef with mustard	Boiled	3	36
" fresh, lean	Fried	4	
" old, hard, salted	"	4	15
Beets	Boiled	3	45
Bread, wheat, fresh	Baked	3	30
" corn	"	3	15
Butter	Melted	3	30
Cabbage	Raw	2	30
" with vinegar	"	2	
"	Boiled	4	30
Cake, sponge	Baked	2	30
Cat fish	Fried	3	30
Cheese, old, strong	Raw	3	30
Chicken, full grown	Fricasseed	2	45
Cod fish, cured, dry	Boiled	2	
Corn, green, and beans	"	3	45
Custard	Baked	2	45
Dumpling, apple	Boiled	3	
Ducks, domestic	Roasted	4	
" wild	"	4	30
Eggs, fresh	Boiled hard	3	30
" "	" soft	3	
" "	Fried	3	30
" "	Roasted	2	15
" "	Raw	2	
" " whipped	"	1	30
Fowl, domestic	Boiled	4	
" "	Roasted	4	
Goose	"	2	30
Heart	Fried	4	
Lamb, fresh	Broiled	2	30
Liver, beef's, fresh	"	2	
Meat hashed with vegetables	Warm	2	30
Milk	Boiled	2	
"	Raw	2	15
Mutton, fresh	Roasted	3	15
" "	Broiled	3	
" "	Boiled	3	
Oysters, fresh	Raw	2	55
" "	Roasted	3	15
" "	Stewed	3	30
Parsnips	Boiled	2	30
Pig, sucking	Roasted	2	30
Pig's feet, soused	Boiled	1	

Articles.	Preparation.	Time. Hours.	Mins.
Pork, fat and lean	Roasted	5	15
" recently salted	Boiled	4	30
" " "	Fried	4	15
" " "	Broiled	3	15
" " "	Stewed	3	
" steak	Broiled	3	15
Potatoes, Irish	Boiled	3	30
" "	Roasted	2	30
" "	Baked	2	30
Rice	boiled	1	
Sago	"	1	45
Salmon, salted	"	4	
Sausage, fresh	Broiled	3	20
Soup, barley	Boiled	1	30
" bean	"	3	
" beef	"	4	
" chicken	"	3	
" marrow bones	"	4	15
" mutton	"	3	30
" oyster	"	3	30
Suet, beef, fresh	"	5	30
" mutton	"	4	30
Tapioca	"	2	
Tripe, soused	"	1	
Trout, salmon, fresh	"	1	30
" " "	Fried	1	30
Turkey, domesticated	Roasted	2	30
" wild	Boiled	2	25
Turnips, flat	"	3	30
Veal, fresh	Broiled	4	
" "	Fried	4	30
Venison, steak	Broiled	1	35

Not only may be learned the comparative facility with which the different articles of food named in the above table may be digested, but also the effect that will result from the different modes of preparation. It is not, however, proposed, nor would it be wise always in health, to select from the table articles which are the most easily digested, to the exclusion of all others. For, as the muscles increase in tone and strength by powerful judicious exercise, so do the digestive organs. The tremendous power of the blacksmith's arm never could be produced by wielding the

pen, instead of the sledge-hammer; nor can a healthy stomach be made stronger by feeding it altogether on such kinds of food as are *very* easily assimilated.

Power comes from labor—to the digestive organs, as to other parts of the body—but not, it must be remembered, from exhaustive labor. If one habitually over-works, depression instead of augmented strength follows. If he habitually eats that which is either improper in quality, or too great in quantity, or that which is not improper to vigorous stomachs, but which his own digestive organs are inadequate properly to digest, then those organs are given too much to do—are over-worked, and become feeble, deranged, or break down as do over-worked muscles and brains.

As a guide in the *adaptation* of food to the different digestive capabilities of different persons, the above table often may be of much value. Thus when one's stomach shows symptoms of indigestion, such as gastric pain, a sense of gastric fulness, eructations of wind, nausea, spitting up of food, or heart-burn, easily digestible food should be used, cooked in a manner to make them all the more easily digested. A strict attention to this will often save serious illness and prove better than medicine.

The table will also be of great advantage to one whose digestive powers are naturally or chronically limited. In such cases, food should be adapted to the digestive powers, and a study of the table will enable one to so adapt them. Such a course will not only be likely to save one's case from growing more serious, but gradually restore strength to his digestive apparatus and renew the man.

No bill of fare will do for all, because the digestive organs of different persons differ so greatly, both in the degree and quality of their powers. As to *degree*, there are some whose powers of digestion seem almost unlimited; and from that, downwards along the descending scale to the feeblest possible. As to *quality*, there is a great diversity. Thus of two persons whose digestive powers are good, and on the average equal, one can eat certain articles of food with impunity, which the other cannot without illness, and the reverse. Almost every one is conscious

of his ability to partake freely of certain kinds of food, which are, as a rule, difficult of digestion, while he cannot use at all certain other kinds, which digest easily with most persons. For example, buckwheat pancakes are both indigestible and poisonous to some, and perfectly wholesome to others (pancakes made of a mixture of buckwheat and oatmeal, or Graham flour, are much to be preferred every way to buckwheat alone); raw apples, for many, are not only innocent, but beneficial to health, while to others they are indigestible, and therefore hurtful. Tomatoes even, healthy for the majority, a sufficient remedy for indigestion and biliousness, must be entirely rejected by the few.

While there can be no bill of fare suited to everybody, there are many things which should be either excluded from the table, or partaken of very sparingly; such as minced pies, all pies with soggy crusts, rich cakes, hard cooked eggs, sausage, pork, warm raised biscuits, warm new bread, apple dumplings with soggy crust, adulterated candies, raisins, wild plums, beef suet, rich complex indigestible compounds generally, mustard, horse-radish, pepper, and alcoholic liquors.

It may be true, though some doubt it, that the four last named articles stimulate digestion for a time. Whether they stimulate digestion or not, they do unnaturally stimulate the inner coat of stomachs to which they are applied, and a corresponding depression naturally follows, as it is a law of philosophy that action and reaction are equal and opposite. The use of gastric stimulants are under the same law; therefore, as a rule, such stimulants are more or less harmful, and especially if used largely. In the opening of spring, if one's stomach seems feeble and languid, a moderate use of condiments for a little time may perhaps be of some advantage; also to old people whose digestion is torpid.

The foods used in winter, as before explained, should be accompanied by more of the oleaginous and saccharine compounds than that used in summer. A *normal* appetite, induced by a *healthy* digestion, generally may be a sufficient guide in adapting food to the wants of the system, during all seasons of the year. But since irrational art has perverted and superseded

natural taste, persons with normal appetite and healthy digestion are few and far between; reason and science must be availed of to supply what has been thus lost through our follies.

Brain laborers require a somewhat different diet from those whose labor is physical. The difference chiefly arises in consequence of a greater consumption of the phosphates in brain workers. To supply the demand which is made by this destruction, such kinds of food as are rich in the phosphates should more abundantly be used, as fresh fish, oysters, eggs, unbolted flour bread, etc.

A mixed diet generally is the most appropriate for active people in temperate climates. It should be remembered that meat is a muscle-making food; that the waste of the muscles is far greater during activity than during inactivity; and that, as a consequence, the *active* need more flesh or nitrogeneous aliment than the *idle*. When, therefore, the laboring man, while idle, or when the habitually idle man consumes as much meat as the body needs when in activity, he makes a mistake which he should correct.

It has been found that when too many kinds of food are partaken at a single meal, the gastric juice often fails to act efficiently upon them. Digesting as they do with unequal facility, the digestive fluid, amid the numerous viands, seems baffled in its mode of attack and victory. It would seem advisable not to eat more than three or four articles of food at any one meal.

Another thing is essential. Healthy sustenance demands changes in dishes to be made from time to time. Such changes in the nitrogeneous class of foods may be made by alternating the different meats with each other. In the farinaceous class, there is a wide latitude both in the great variety from which to choose, and in their preparation for the table.

Books sometimes advise us to leave the table with a keen appetite. The advice is too general and too sweeping, and if *all* were indiscriminately to follow it, many would suffer from actual starvation. Let us give the advice a brief analysis. If a person has been deprived of one or more meals, or if he has been accustomed to poor living, or if he eats too fast, then, in

either case, if he is given access to a sumptuous table, he is very likely to eat too much unless he leaves the table with an appetite. Under these circumstances, the stomach receives all the food the system needs before the system has time to become conscious of a sufficiency. So during convalescence from illness, the appetite is often abnormal and voracious, when the patient must either himself control the amount he eats very circumspectly, or else be restrained by the nurse. *Healthy* persons who have abundance, and take their meals *regularly* and *slowly*, need not entertain the least fear as to the capability of the system to correctly respond, and to destroy the appetite when the requisite nourishment has been taken. It may be stated that a healthy person should continue to eat as long as the appetite craves food, but appetite should always be distinguished from a gluttonous palate.

Shall we take cold or warm drinks at table? We have before intimated that warm food digests more easily and perfectly than cold; and that therefore warm food is better adapted than cold food to the physiology of digestion, and to the preservation of health. Cold drinks taken at the time of meals cool the food and the gastric juice. It therefore follows that warm are to be preferred to cold drinks. For children this plan can hardly be practised, as warm water is repugnant, while the stimulation of tea and coffee is not only unnecessary, but harmful to the young. Nothing better than cold water, and warm or cold milk, can be recommended for children, caution being always used that not sufficient cold water be allowed, at the time of meals or during the digestive process, to cool the food in too great degree, nor to dilute or cool the gastric juice too much. Adults should also either drink water or milk, or small portions of tea or coffee. A small portion means not more than one cup during one meal. That cup should not be hot nor iced, but *warm*, and sipped slowly.

Just after the digestion of a meal—two or three hours after the meal—all healthy persons may drink cold water to their entire satisfaction: some say, by their practice, water and whiskey—the water mostly left out; acting on the plan of the

Kentucky Congressman who, when asked why he drank two cocktails before breakfast, answered, "One makes me feel like another fellow, and then I must treat the other fellow." Spirituous liquors are not to be included in our beverages. No healthy person needs them.

The dining-room should be warm, large, well ventilated, light and clean. A basement cannot well fill all these conditions, so basement dining-rooms had better be avoided.

WHEN TO EAT.

Why is it not best to eat little and often, or almost continually to keep nibbling? There are three sufficient reasons: First, the digested and partially digested foods become mixed in the stomach, and it has been found that the gastric juice does its work inefficiently under that condition. Second, the gastric juice acts most effectually on food when the stomach is moderately full. Third, the digestive organs, like the muscular system, need alternate labor and rest. It follows, that one meal should be perfectly digested before another is taken; that when food is eaten it should be a full meal; that after a meal is digested, the digestive organs should be allowed to rest. Since the average time taken for the digestion of a meal is about three hours, a safe rule is to permit three hours of rest between meals during the day's activity, making six hours elapse between breakfast and dinner, and six hours between dinner and supper: say breakfast at 6.30; dinner at 12.30; and supper at 6.30 o'clock.

During the hours spent in sleep the digestive process is slow, and the waste of tissue is slow; consequently a longer time should elapse between supper and breakfast than between the other meals.

Everywhere, and especially in malarious climates, breakfast should be taken before exposure to, or labor in the open air, because the reactive powers of the system are less when the stomach is empty, which renders one more susceptible of climatic influences and more liable to disease. For a similar reason, meals should be regularly taken when one has the care of the sick.

VEGETABLE FOODS.

1. WHEAT BREAD has long and deservedly been called "the staff of life." But it is not, nor the staff of health either, unless it is good. Have you, my brother, married a wife who uniformly makes bread that is sour and sodden? Send her to a good bread-maker, where she may learn to make a loaf which is light, and *evenly* light, free from sourness and mustiness, the crust well baked, but not burnt, the color white as snow. Let such a loaf be taken from the oven, and put away uncovered, in a clean, airy place for twenty-four hours, and then you and she may eat of it, and both will grow in health, and in grace—in health because such bread is wholesome, and digestible; in grace, because you are so much the less likely to be vexed by the sins and trials for which dyspepsia is accountable. Words are inadequate to express the importance of always having *good* bread. Good cookery in everything is truly important enough, but bread we eat daily—three times a day; and if it is always bad, it will cause divorce, or the eternal mutterings which are worse than divorce.

2. OATMEAL is more nutritious than flour, and is a very valuable as well as a palatable food. Oatmeal porridge or mush should be cooked a full hour, and it is delicious eaten with milk, cream or honey. To this the Scotchmen are greatly indebted for their brawny bone and stalwart muscle; if we were to use much more of the same food we should be the better for it.

3. CORN is, by many, largely used. It is rich in nitrogen, and hence nutritious. In the form of mush, cooked an hour, and eaten with milk, it is wholesome, and to many delicious: the bread is harder to digest.

4. THE POTATO is not very nutritious, since it is poor in nitrogen, and contains only about twenty-five per cent. of solid matter. But they are easily prepared for the table, cheap, and excellent as a succulent vegetable food.

5. FRUITS, if ripe and fresh, are wholesome to most people when eaten at the time of meals and in moderate quantities. Their nutritive value is small, but they are largely consumed on account of their fine, tempting flavors.

6. Sugar and syrups are largely used, for their agreeable flavors. As they are heat-producing, they are by many too largely used in the summer time. The quantity should be regulated according to the atmospheric temperature.

ANIMAL FOODS.

1. Milk is, to nearly every one, both in health and disease, not only wholesome, but it is the only food except unbolted wheat flour bread that contains all the constituents, in so nearly the necessary proportions, to properly nourish every part of the body. Its quality should be *good*. In order that it may be so, it must come from a perfectly healthy cow that is fed only wholesome food, and pure water; and wholesome food is not decayed vegetables, nor filth of any kind. Milk must be kept in clean dishes, with a clean atmosphere around it. It must not be kept near other kinds of food.

Good milk has the following physical properties: it should, when standing in a glass-vessel, be perfectly opaque, and white, not blue. On standing there should be little or no sediment. It should have a pleasant taste and odor. It should yield about ten per cent. of cream. It should be much used by everybody, young and old. A gentleman said to another when he told him that he ate bread and milk every evening for supper, "I should not suppose that a man worth as much as you are would live on bread and milk." The man who is worth ten cents or more, after his debts are paid, need not feel himself under any particular obligations to live on unwholesome food, or food that kills, for the sake of spending a great deal of money on his eating; nor reject healthy food because it is cheap.

2. Butter, when good and used in moderate quantities, is a relish, and indispensable, but it should be *good*. To be so it must be clean; it must not be rancid; the oil-cells must not be broken by rubbing in the working over; it must not be adulterated with lard, or anything worse; and when melted there should be little or no deposit of any kind.

3. Cheese is exceedingly nutritious, and in small quantities a sharpener of the appetite.

4. Beef should have a subdued, or, if you please, a delicious redness; not too dark, nor yet pale. If very dark red, it shows a probability that it was killed without the letting of blood, or not killed at all. If too pale, if the animal is not young, it denotes that it was diseased. The fat should be of a yellowish color and free from specks of blood. The lean should be fine-grained, and elastic to pressure, and when cut, show a cleanness and a dryness of the cut surface.

5. Poultry—Large feet and joints denote that the fowl is young; violet thighs and a small neck, the opposite. Poultry should not be too fat, nor too lean. In the former case it is not easily digested; in the latter case it is not juicy.

6. Fish—Fulness of the eyes and pinkness of the gills denote freshness. Fish is often sold as fresh, when it is actually in the state of decomposition, the offensive smell being masked by the use of ice.

7. Eggs contain about fourteen per cent. of nitrogeneous matter, and may, in a great degree, take the place of meats. They are wholesome as well as nutritious when fresh, and not hard cooked. These two conditions should always be insisted upon, especially the freshness. A good egg is more transparent when held up to a strong light than a stale one. A fresh egg will sink, and a bad one float when put into a solution of salt and water (one ounce of salt to half-pint of water). No food should be fried.

WATER—TEA—COFFEE—STIMULANTS.

The average amount of water daily needed by an adult, exclusive of that which is contained in the daily food, is about two pints. If too much is drunk the excretory organs are given too much to do; the blood becomes too thin, and the system more or less enfeebled: and if too little fluid is taken, the system suffers in other ways.

Water should be nearly free from vegetable and animal impurities; and not *too* hard. Properly distilled water is of course pure, but it is flat to the taste; so is rain water in a less degree. Pure spring water is the water which nature undoubtedly designed for man. Well water is, in its properties, nearly the same

as spring water, but it is very difficult to keep our wells uncontaminated.

A great deal of the water used at many restaurants for making lemonade, soda-water, ginger-beer, etc., is impure, and hence people should be cautious in using these liquids.

Filtration will partially purify certain waters, and so will boiling for twenty or thirty minutes. Where there is doubt about its purity, it should always be both filtered and boiled. The *safe* way is to have it pure in the first place. Boiling hard water will soften it partially.

Good Tea is soothing and cheering, and when drunk in moderation, and not too strong, nor too hot nor cold, it is not unwholesome to most adults. It is astringent, and the astringency is objectionable in cases of constipation. In such cases, if used at all, care should be taken that it be not steeped too long, and that it is not boiled at all. Children do not need this nor any other stimulant.

The best tea has the best aroma, the most agreeable flavor, and colors the water least. Inferior, cheap teas often consist of steeped tea-leaves, leaves of other plants, dust, iron filings, etc. Good tea is often colored—the black with a coating of black lead, and the green with China clay, tumeric, etc. Families, even if poor, who use tea at all, had better purchase the best uncolored tea. The excessive use of tea is productive of dyspepsia and nervous ailments.

Coffee is not as astringent as tea, and by some it is considered not so likely to induce nervous derangements. Of this there are strong doubts. It is not so likely to be adulterated as tea, and when adulterated it is generally with chiccory, which is not unwholesome, but yet not desired because it does not possess the agreeable flavor of good coffee. It is better, in order to be sure of having good coffee, to buy the raw beans, and roast them at home, a little at a time and at short intervals.

Chocolate, when prepared in milk, is both a wholesome and nourishing beverage, and should be more largely used.

Alcoholic stimulants will be considered in another place.

CARE OF THE TEETH.

Since food must be thoroughly masticated to render its perfect digestion easy or certain, it follows that we should have good natural teeth, which unfortunately few possess. Surely the foul breath, and the excruciating toothache which decayed teeth cause; the facial deformity, when they are extracted; the resulting dyspepsia—all, it would seem, are sufficient evils to move us to preserve the natural teeth as long as possible.

We have every reason to believe the teeth were originally designed to last as long as their owner. Human error has so far thwarted that design, that we may well be amazed at the almost universal early loss of them.

The *causes* which involve the early decay and loss of the teeth are numerous; some of which are in operation at the earliest age of childhood, and even before the birth of the child; other causes, adult life is accountable for.

DENTITION.—It is a well-known fact that the period of dentition is also the period of the greatest mortality among children. This fearful mortality should not, I think, in any great degree, be ascribed to dentition alone as a cause: for teething is, under favorable conditions, a natural process, and should naturally be attended by a small amount of constitutional disturbance. When the constitution itself is disturbed by indigestion, or other disease, *then* the dentition is often so difficult as to help very greatly to increase the constitutional derangement and the danger. It is to be remembered that the child at this age is highly susceptible to disease on account of its natural tenderness, and because important changes are going on in the stomach and intestinal tract, etc., in the way of preparing the child to eat and digest solid food. This renders it imperative at this period of life that children should receive the most judicious hygienic care.

But it must not be ignored that difficult dentition under existing circumstances does aggravate, and sometimes greatly aggravate various infantile disorders, and greatly assists also in determining disease to the membranes of the brain. Indeed, in *all*

the diseases of teething infants, the condition of the teeth should receive the most careful attention.

Since the mischief of difficult dentition arises both from direct pressure of the teeth against the gums, and the nerves of the gums, and a backward pressure, caused by the resisting gums, it is evident that the remedy exists in freeing the teeth from the pressure by lancing the gums, and that when the usual general symptoms of difficult dentition are present, whether or not there is much local swelling or other local manifestations. Since the object is to remove tension, the incision should extend *through* the gum to the crown of the tooth. The front teeth (incisors) need only one incision into the gum, and that in the line of the arch. The double teeth require two cuts for each—a crucial incision thus +. The operation is simple, causes very little pain, is practically free from danger, and does very much good. If the gums bleed too long, which they are not apt to do, a little finely powdered alum, or persulphate of iron, rubbed into the incision will stop it.

The premature decay and extraction of the temporary teeth often result in an irregularity of the permanent set, and inflict permanent injury on the bicuspids. As a rule, they should not be extracted until the permanent teeth are ready to appear. They should not decay at all. If allowed to decay, their pulps become sensitive and give rise to pain; or die, and give rise to gum-boils. In either case mastication is interfered with, and often a life-long dyspepsia is engendered.

There are cases, however, in which the measurement of the arch of the jaws corresponds with that of one parent, and the diameter of the teeth with that of the other parent. In such an instance there may be either too much or too little room for the permanent teeth. In the latter case one or more of the teeth should be early extracted in order to secure regularity of the permanent set.

To save the child from the sufferings and diseases arising from dental decay, the teeth, from the very first, should receive close and careful attention. *Cleanliness* of the teeth is an essential preventive of decay. They should at least be carefully

brushed daily with a small, soft brush, dipped in a solution of salt and water, or castile soap and water. If they show signs of decay the cavities should be filled and otherwise cared for by a dentist.

Tooth Nutriment.—It has been before stated that every part of the body is continually undergoing waste caused by organic activity, and constant renewal by the food we eat. The teeth are no exception to this rule. It is to be remembered that foods, according to the constituents they contain, furnish muscle, fat, brain, bone, heat, or tooth material. Hence no food can furnish material for teeth, that has no tooth nutriment in it: therefore foods that contain such nutriment must be used by young and old, or the teeth will decay from starvation. Pregnant women, and women who are nursing their babes, and the babes themselves while teething, need such nourishment still more than others.

Milk contains, in nearly the requisite proportion, all the elements necessary to the growth, renewal and support of every part of the body, and essentially possesses tooth-making material. Milk should, therefore, form the exclusive diet of the young child, and the partial diet at all ages.

Oatmeal, unbolted flour bread, and wheaten grits are rich in tooth nourishment, and that of the body generally, and should form a part of the daily food after the child is a few months old on to old age. The child should not eat these, or other starchy foods when too young, since the secretion of saliva before the age of three months is very limited; and for some months after that the saliva is deficient in the fermentative quality, which is essential to fit starchy food for a normal digestion.

In order that the teeth be properly nourished and thus saved from one chief cause of decay, it is essential that the system be kept in a condition in which it can normally appropriate food. Nutrition means digestion, absorption, respiration, circulation, and assimilation. Hence again the importance of knowing how to eat, what, and when.

Irregularity of the teeth, in the arches of the jaws, is a source of imperfect mastication of food and the consequent im-

perfect digestion, of faulty pronunciation, of a disfiguration of the face, and increasing liability to decay. Irregularity may proceed from many causes, some of which are accidental, or unavoidable. I have space only to mention one or two frequent and avoidable causes of irregularity.

Before the teeth make their appearance in the mouth of the babe, the sockets of course are sufficiently large to contain the crowns; and after the emergence of the crowns, the teeth for a time are surrounded by soft and yielding tissues. It therefore takes but small and repeated force to divert the teeth from their proper positions. Thus the habit, which some infants have, of thumb or finger sucking, often causes the teeth to become irregular. The sugar-teat, or the retaining of the nursing-bottle after the child has taken sufficient nutriment, is liable to produce the same result. After knowing these causes the mother will observe what is the obvious prevention. It is not always an easy matter to stop a child from sucking its thumbs and fingers. It is easier to prevent the formation of the habit. But if the habit is already formed, a good way to correct it is to make an over-garment, without sleeves, to be fastened around the neck, and reaching to its feet. This will prevent the child from reaching its mouth with its fingers.

Bad health, or a mental or nervous precocity, at the expense of the physical health, has a tendency to cause an imperfect development of the teeth.

HOW THE TEETH ARE INJURED.

1. The teeth are injured indirectly by the use of indigestible food, or by food deficient in tooth nutriment.

2. They are injured directly by using them as nut-crackers, biting off threads, putting into the mouth in quick alternation very cold and hot fluids, or solids. Much mischief is done to the teeth by certain tooth powders and washes, such as alum, charcoal or other hard, gritty substances, and all acid tooth washes; all of which may give more profit to the dentist than comfort or profit to the owner of the teeth.

For certain diseases of the mouth or gums, astringent, stimu-

lating, or tonic applications, as the dentist shall advise, are often beneficial. If the mouth and the secretions of the mouth are healthy, tooth and mouth washes should be simple, pleasant to the taste, and slightly antacid: such as a solution of tepid water and castile soap, with a little bicarbonate of soda, or a solution made of tepid water, salt and soda.

If cleanliness of the teeth is neglected, the fine particles of food adhering to the teeth and between them will become acid and ferment; tartar is apt to collect on the teeth, either of which causes rapid decay. To keep the teeth free from particles of food, they must receive attention after each meal. They should be brushed after each meal, or brushed once a day, and thoroughly rinsed twice a day with tepid water, to which a little bicarbonate of soda should be added to neutralize all acid. When decayed teeth are causing offensive breath, let the mouth be rinsed after the two meals with the following: solution of carbolic acid, 15 drops; water, 6 tablespoonfuls; mix

The brush and the mode of using it should not be a matter of indifference. The brush should be rather soft and small, and the bristles variable in length so as to be easily insinuated between the teeth. The brushing should be done moderately, and chiefly in the direction of the length of the teeth; care being taken to remove all accumulations from between the teeth, and from the depressions in the crowns.

The removal of the concretion or tartar, which often incrusts the teeth, is so unsightly, and causes disease of the gums and rapid decay of the teeth, should receive prompt attention. Go to a dentist, or if you choose to remove it yourself, it usually may be done by moistening one end of a wooden tooth-pick, dipping it in powdered pumice-stone, and rubbing the teeth which are incrusted with the tartar.

Use a tooth-pick after each meal, made either of quill or soft wood. Metal should never touch the teeth, unless the metal is in the hands of a dentist; and surely it is for our interest to keep the machinery of the mouth out of his hands as long as possible. Every cavity that appears should at once be filled, and filled with *gold*.

Children, when quite young, should be taught to pay strict attention to the cleanliness of their teeth, that a permanent habit of care may be formed.

Diseases of the general system often injuriously affect the teeth; so much so that people ofttimes ascribe the injury to medicine, when the medicine is wholly innocent. In the fevers, the secretions of the salivary glands are more or less suppressed; and the secretions from the mucous membrane of the mouth are often greatly vitiated. The remnants of food and debris remaining in the mouth, becoming mixed with the vitiated secretions, undergo fermentation and decomposition, the nature of which is such as to greatly injure the teeth, and contaminate the blood through the breathing of the exhalations from the diseased secretions. Hence the great importance of assiduous care relative to scrupulous cleanliness of the teeth and mouth during illness; and this unfortunately is almost universally neglected.

Cleanliness of the teeth at all times is not only conducive to health, but adds much to personal appearance. However well dressed, and however tidy one may be in other respects, if her teeth are black and dirty, her mouth is anything but sweet and charming.

Purity and simplicity are the foundation of health—purity and simplicity of food, of water, of air, of the house. of the clothing, of the person, and of the life.

CLOTHING.

When primitive man arose on the different parts of the globe, he had to struggle for his existence. The chief objects of this struggle were food to support life; and clothing, in the colder climates, to sustain warmth. To feed him he found vegetables in their native state, and the flesh of animals: to clothe him were the skins of animals. Man's keen and fertile brain was not content with this rude mode of life. Therefore his intellect, aided

by the marvellous mechanism of his hand, multiplied, improved, and cooked his foods, which loaded his table bounteously enough, and almost refined enough for the gods; transformed nature's unwrought fibres into cloths of the finest textures which clothed him like a man, and woman like an angel.

But man, with all his abilities, has done some extremely foolish things. He has lost sight of wholesome cookery in his overweening desire to tickle his palate. He has forgotten that the *greatest* purpose of clothing is to protect his body from the vengeful cold of our changing climates, and he has sacrificed health to a perverted taste, and to his peculiar notions of ornament. There is little need for such sacrifice. Neither is there a question here of health *or* the beautiful, *which?* but health *and* the beautiful, one and inseparable.

The Orinoco Indian will, according to Humboldt, labor for two weeks, to purchase paint with which to ornament his body, though he seems quite indifferent to personal comfort; and his wife or daughter, who would not hesitate to go out among her acquaintances entirely naked, would not, for a moment, think of making fashionable calls unpainted! Ornament first, and chiefly—comfort afterwards or never!

Not exactly so with American ladies and gentlemen—*that* is not the latest fashion. Yet it is an easily perceived truth, that even in America, both comfort and health are often sacrificed for the sake of personal decoration, and in the eternal chase after the vain butterflies that sail in the upper air. Conformity to inexorable fashion, and to be brilliant in this conformity, is the irrepressible law, which too often crushes all ideas of warmth, comfort, and health. So the reigning queens, encased in elaborate toilets, wield their pretty jewelled sceptres, and make their "conquests."

TEMPERATURE.—It should be had in mind that an essential object of clothing is to sustain the *proper* or *comfortable* temperature of the *whole* body. The *amount* and *kind* of clothing must therefore be adapted to the atmospheric temperature, and to the person. Adapted to the person, because the power of resistance to cold varies very greatly in different individuals,

and in the same individual at different times, depending on the state of health, etc.

It is a natural law that when two bodies of unequal temperatures come into contact, the warmer body parts with some of its heat, and the colder body with some of its cold, thus tending to form an equilibrium between the two bodies. This interchange of temperature is called conduction. If a heated stove or the unclothed person be placed in a cold room, warmth will be given off to the air by radiation.

MATERIAL.—The different fabrics used for clothing differ very greatly in the facility with which they conduct heat. Some are almost absolutely non-conductors. If the person is clothed with apparel of this class, this outside covering becomes a sort of artificial shell which prevents, to a great extent, the heat from escaping from the body. Sufficiently clothed thus, in a cold day the organic generation of heat balances its conduction from the body.

The conducting powers of clothing made of wool, fur, silk, hair, skins of animals, etc., are very small, so we call them warm, and choose them for winter wear. Garments made of wool or silk also absorb moisture readily; therefore they are peculiarly suited to be worn next the skin, serving the double purpose of preserving equable warmth and dryness to the person.

Garments made of cotton, still more of linen, are cold in winter, because their rate of conduction is very great.

Thus by a careful adaptation of the material and thickness of our clothing to the temperature of the weather, and the condition of our health, we can make ourselves comfortable, avoid the loss of a vast amount of vital force, which cold is able to take from us, and often shun those annoying or dangerous congestions of the bronchia, pleura, lungs, etc.

COLOR.—To protect against the rays of the sun, white garments are best, and gray next. These colors are for that reason the most suitable for the summer. They are well suited for all the seasons of the year.

FLANNEL under-clothing in cold climates should be worn during the winter by every one. Great care should be taken

to put it on sufficiently early in the fall, and not to leave it off too early in the spring. The aged, the infirm, children, and those having a hereditary tendency to consumption, should wear flannel under-wear all the year, thick goods in the winter, and thin in the summer.

Overcoats, shawls, cloaks and furs should be worn in cold weather, but care should be taken that abundant wrapping be not over-done, lest an inability to resist the mildest atmospheric changes be induced.

Muffling the Face and Neck.—As certain persons are so iron-clad as to endure the abuse of wet feet with impunity, so some, with like impunity, can expose their bare faces and necks to the pitiless teeth of winter; yet it would be murderous for others to do either. Every adult person, without reference to any other living being, should judge for herself or himself, by personal experience alone, the amount of covering she or he actually needs. The wisest course for all to pursue is to keep themselves as *comfortable* as possible during all seasons of the year. No one can say that it is pleasant or comfortable to feel upon the naked skin, or breathe an atmosphere which sends the mercury down to zero, or to 20° below zero, and for many it is dangerous. For the latter, at least, sufficient covering over the face, to moderate the cold's intensity, is simply a thing of safety.

Waterproof garments are the best protection against cold winds and rain, but care should be taken that they are not needlessly worn. For while they keep you dry, they at the same time prevent the escape of the fluid and solid excretions from the body.

Hats.—It is an old and a pertinent command to keep the head cool and the feet warm, and modern hygiene has very properly added as to the feet, "and *dry*." How, then, should our heads and feet be dressed? Hats should be light, so as not to overburden the head; loose, that they may not interfere with the circulation through the head; permeable to the air, that they may not prevent the escape of the excretions from the head; the texture and warmth adapted to the temperature in which they are

worn, but never should they over-heat the head. The tall stiff hat worn by men is too heavy, and it impedes the natural evaporation from the head.

THE FEET are much-abused members. Often in winter thin cotton stockings and fairy shoes are the only covering they receive. In consequence of this, they are often cold and damp.

Since the feet are so humble as to tread the very ground for us, it seems difficult for some to believe that they are of much consequence. That the whole body and life are closely related to these neglected extremities, is fully proved. Thus the physician applies heat to the feet to relieve a congested brain; a nail-wound of the foot often produces lockjaw; wet and cold feet will cause colds, bronchitis, pneumonia, sore throats, and often develop diphtheria. Humble though they are, they wield a tremendous influence over the weal or woe of men. If we would have the weal instead of the woe, the feet must be kept warm and dry all the year round.

BOOTS and shoes should have thick, broad soles, broad and low heels. Narrow heels interfere with stability and security of locomotion. High heels cause a slight inclination of the body, and hence bring the weight upon the muscles out of the natural line, causing weakness of the back, and predisposing to certain deformities. Rubber shoes are probably the best preventives of wet feet, but for the same reason that any other rubber clothing is objectionable, so are they. They should be worn only when walking on wet ground.

If the feet get wet, one should keep in rapid exercise until the wet shoes and stockings can be taken off. Then the feet should be thoroughly warmed and dried, and dry shoes and stockings put on equally as thick and warm as those taken off. The evil consequences of wet feet may usually thus be prevented.

Children, delicate people and old people should wear woollen stockings all the year. Those for summer should be thin.

TIGHT LACING.—The belt around the waists of men, instead of suspenders over the shoulders, is decidedly improper for the same reason that tight lacing is for women. Aside from this and the high, hard hat, the manner in which gentlemen dress is

far more in accordance with the preservation of health than is that in which ladies dress.

The purification of the blood depends on its circulation, and on respiration. Or it may be more plainly stated that it is not only necessary for the blood to circulate, but that it circulate *freely*, normally; it is not only necessary to breathe, but to breathe pure air freely and normally. If these conditions are not filled, a portion of the waste products must essentially be retained in the system, causing impure blood, and hence many local and constitutional evils—such as pimples on the face, a dark unsightly circle around the eyes, paleness and sallowness of the countenance, lowered vitality, an exciting cause of consumption, etc., etc.

The chest has two movements, to wit: expansion and contraction. During its expansion, there is a tendency to the formation of a vacuum, and in consequence the air rushes into the lungs, and into the air-cells of the lungs, thus supplying the blood with its required oxygen. During the chest's contraction, the air is forced out of the lungs, and with it, the carbonic acid, etc., which it has received from the blood, rendered impure during its circulation through the system. This process of expansion and contraction is called respiration or breathing.

Now it is obvious that if the chest be encased by an inelastic bandage, the expansion of the chest, in the act of respiration, is limited in proportion to the tenseness of the bandage: that, therefore, the amount of air taken into the lungs and the purification of the blood are limited in about the same proportion. It is true, that in such an emergency, nature, ever unwilling to be out-done, makes greater demands on the diaphragm; but the movements of the diaphragm are limited, and cannot compensate for the loss.

The fashions of woman's dress, it is evident, have the same effect in preventing the chest's expansion as would the inelastic bandage. Consequently she who wears tightly fitting garments is essentially subject to the evil consequences of impure blood, named on a preceding page.

Another ill effect proceeding from tight clothing is that some

of the organs below the chest are displaced, and all in consequence are kept under a continued state of irritation, followed by derangement of their functions, and by serious diseases, as dyspepsia, uterine complaints, etc.

Even if the clothing is not tight, its weight alone, when suspended from the waist, is sufficient to drag down and displace the abdominal and pelvic organs, and to cause the diseases resulting from such displacements. The whole weight of the clothing should, by all means, be suspended from, and borne by the shoulders. Some ladies *actually* wear their clothing thus, but many more wear them so nominally, and *only* nominally, since they fit so tightly at the waist as to make *it* after all the point of suspension. Yet in the midst of a forced expiration, they will show you how loose their garments are! Sweet Dears, they do not *mean* to deceive; from long habit of feeling the pressure of their clothes, they have come to the most assuring conviction that they are really loose. They only insist that their dress must fit their forms! Yes, that is entirely proper, but it is not so to *squeeze* the form into that of the most attenuated wasp. There is a rule by which every woman ought to be governed in the hygienic looseness of her clothing, viz.: let her *fully* expand her chest, and if she feels a resisting pressure from any garment, it is certainly too tight; during a free, natural respiration, she should not feel any pressure whatever.

It is not true that a small waist always renders a woman more beautiful. A small waist is graceful to a slim lady (and she generally and naturally has it); but decidedly uncomely to one who is fat, or to one whose hips are wide and angular. The *natural* curve from the armpit to the hip of a well-formed woman is rounded and graceful, and in harmony with a cultured, artistic eye, and a true æsthetic taste; and ladies have, it would naturally seem, only *really* to recognize this fact, to make the greatly needed reform—if not in themselves, at least in their growing girls, who are soon to take their place in the activities of woman's life, and in the arena of fashion. Why, ladies, is it not possible that God has formed your waists as much in harmony with the general form of your persons as you can do by


DRESS

your incessant squeezing? Would it not, therefore, be about as well if women were never more to attempt to improve, in their accustomed manner, the work which God has made, and made so well? The Greek artists, true to nature, never made the mistake of thwarting her plans as applied to the form of woman.

A HYGIENIC MODE OF DRESSING.

A lady's dress should always be so made as to conform to the natural lines of the person, and yet be *really* loose around the body. It should warmly cover the neck and extremities. If corsets are worn, they should be so loose as to give the *chest entire freedom of motion in respiration.* The skirts of the lower garments should be broad enough and short enough to give freedom in the motions of the limbs. Garters should be attached to the clothing above the knee; because if fastened around the limbs they obstruct the circulation of the blood, and sometimes cause varicose veins. The neck of the dress should be high, because if low, the upper and weaker part of the chest is so exposed as often to induce diseases of the lungs. Thick flannel underwear should be used for winter, and thin flannels for summer; sufficient on the feet to keep them warm; made of a texture that will keep them dry. Shoes should be wide and thick-soled. Just sufficient, but not too much clothing should be on all parts of the body to sustain a sufficient and an equable warmth. While it is the privilege of every woman, as well as a pleasure to every man, for her to dress in good taste and in conformity with all suitable and harmless fashions, let her not ruin her physical life, and that of her children, and her children's children, by a senseless imitation of all the fashionable follies.

Woman in a certain degree is the slave of fashion, and the tone of society at the present time is such, that she is *essentially* the slave of fashion. Why will not an irrepressible band of women with brains and influence, and moving in the highest realms of fashion, clothe themselves in a sensible, tasteful and healthful attire, and cause a reform? A noble work for noble women; and yet a work which men can never do, though their tongues were tuned by angels, and their pens moved by divinity.

Must the rulers of fashion, inspired with an insatiable love of change because they covet our dollars, continue forever to clothe our wives, sisters, daughters with the grotesque as well as with the beautiful, and that which invites sickness, and even an early grave? *Must* ladies, if they would remain within the charmed circle of high society, forever go on aping the arbitrary behests of the potent gods and goddesses of style, who in taking our money, also take our healths and our lives? Ladies *are forced* thus to float on the waves of society, even at this fearful cost, and at the cost of intense agony in the day of their maternal ordeal.

I am glad that many sensible and stylish women dress, so far as is consistent with living fashions, in accordance with the laws of health; and they deserve much praise for it. Others, to their discredit, live fully up to the extreme fashionable and literally agonizing gentility. Of the latter I am constrained to say, that I can honestly advise any respectable young man not to marry such a woman; not to marry one whose waist has been waspishly deformed to order. For in all probability she will never be well—never be the woman in any sense that she might have been. And what a birth-right may not such a woman bequeath to her children! If the ways of women were wise, they would not be thus deformed. Being deformed, they would never consent to marry.

The clothing of children will be treated elsewhere.

BATHING.

A mother once brought her child that had some skin affection to my old medical preceptor, and asked the question: "Doctor, what can be done for my child?" The doctor, looking the child over from head to foot, and finding him besmeared with dirt, and looking as nothing else but a filthy child *can* look, answered: "Take your child home, madam, and wash him all over every day with warm water, with plenty of good soap

in it." The mother was of course vexed and astonished at so strange a prescription, and yet the prescription was in plain language just what the child needed. She might have lost her astonishment if the doctor had explained to her that a large portion of the waste of the human body, or the products of disintegration, pass out of the system through the skin; that the principal apparatus through which this is performed is the sudoriparous glandular system, or sweat glands; that the skin over the whole surface of the body is occupied by about 3,000 of these minute twisted and coiled-up glands and tubes to every square inch; that each one of these tubes opens upon the outside of the skin by a minute opening called a pore; that there are about seven millions of these glands, tubes and pores existing in the skin of a man of ordinary stature, and altogether aggregating about twenty-eight miles in length; that there is continually passing to the surface of the body through these tubes a large amount of fluid and solid matter, consisting of water, carbonic acid, and other products of organic waste; that the scarf-skin scales are as continually being loosened and deposited on the surface of the body, there mixed and agglutinated with the oil that oozes from the sebaceous glands, and with these all the floating dust, the whole forming a coating more or less complete over the whole skin, and obstructing more or less completely the seven millions of tubes, preventing in the same degree the waste organic products from passing through the pores, and that as a result such an obstruction and consequent retention would cause impure blood, affections of the skin, or lay the basis of constitutional diseases.

PERSPIRATION.—Through the sweat glands and pores two kinds of perspiration proceed, to wit: the sensible and the insensible. Perspiration is called sensible when it can be seen as moisture or drops on the skin; insensible when it is carried off in the form of an invisible vapor as fast as it is generated, and which is continually taking place. This invisible secretion contains from five to twelve parts of solid waste matter in 1,000 parts, varying at different times, and under different circumstances. About two pounds of waste, insensible, solid matter, in a state of

incipient decomposition is daily perspired through the pores of the skin of the average adult.

When from any cause, as when the atmosphere is humid, the skin exhalations are in some degree obstructed, we feel oppressed and stupid. If we thoroughly varnish an animal's entire skin so as completely to prevent all transpiration, death is the result. The same procedure with the skin of man would undoubtedly cause his death. If such are the effects of extremes, we may naturally suppose that the evil consequences of perspiratory obstruction would bear a close relation to the *amount* of such obstruction, and to the physical vigor of the person, because it is a physiological fact that such a condition does vitiate the blood, does lower vitality, and is the source of many ailments and many serious diseases. The prevention of these unwelcome effects exists in the prevention of the causes of the retention of the cutaneous secretions. The chief causes of such retention with which we have to deal are the habitually wearing of water-proof clothing, neglect of ablutions and atmospheric humidity. Hence the *necessity* for baths.

Cleanliness is another reason why we should bathe. No small reason and no small incentive, since cleanliness is not only the first step towards godliness ; but an index of intelligence, humanity, and an advanced civilization.

HOW OFTEN TO BATHE.

The necessity for bathing being understood, we may inquire what the demands of the system are as to the *frequency* with which baths should be taken.

The air is the vehicle by which the waste particles of matter pass away from the skin. In the act of passing there is more or less deposited upon the surface of the body, which mixing with the loosened scales of the scarf-skin, dust, and the oil continually oozing from the sebaceous glands, sooner or later obstructs the pores, and the waste matter is retained in the system. The frequency of baths obviously depends upon how long it takes for the pores of the skin to become obstructed. This is not definitely known. That under ordinary circum-

stances the accumulation upon the skin is slow, there can be no reasonable doubt; just *how* slow, it is not easy to demonstrate.

Many authors tell us to bathe every day. Why not every hour? Certainly under ordinary circumstances, dangerous, or even unwholesome agglutinations cannot form upon the person in one hour, nor in twenty-four hours. Judging from the good health of many who seldom or never take a general bath, it would seem that nature's mode of conveying the impurities from the body and skin is rather effectual, though the notion must not be entertained for a moment, that such persons, *apparently* well, are *really* as healthy and vigorous as are those who, other things being equal, keep themselves clean. Observing physicians are well aware that in disease, the mortality is greater among those who have not regularly bathed when in health, than among those who have. A fact that may be accounted for by the theory that the perspiratory apparatus in those who do not take their baths become somewhat obstructed, causing a retention of a portion of the decomposing organic matter, which should be liberated from the blood, and exhaled from the cutaneous system. Not always enough to *cause* disease, but sufficient to so lower the vital energies of the body, that when in the course of human life disease comes, the patient more readily succumbs from want of sufficient reactive powers.

One should bathe sufficiently frequent to keep the skin clean; more often is quite unnecessary. As a rule, a general bath once or twice a week for persons in ordinary employments, undoubtedly subserves all the purposes involved as well as once or twice a day. And better for two reasons at least: 1. The system must react after every bath, which takes vital energy, and takes it from organs that need it. 2. The skin is supplied with sebaceous glands, the function of which is to furnish oil to lubricate the skin to preserve its flexibility and softness, and to protect it and the general system against atmospheric changes. The act of cleaning the skin by bathing washes off that oil, especially if soap be used. The oil will, of course, soon be replaced, but each bathing exposes the person for a time; and

no one can well afford a repetition of such exposure more often than the preservation of cleanliness demands. Man is not aquatic by nature—he need not be so by art.

The frequency of bathing must, in a degree, be left to each one's personal experience. If one's health is better for bathing daily instead of once or twice a week, that is the best evidence that he should bathe daily: and *vice versa*. Then again the exhalations from the skin of some have an unpleasant odor, which makes frequent baths almost a necessity. For such, a little solution of carbolic acid mixed with the bath-water will be of great advantage. Very frequent baths are indispensable in many diseases, especially the fevers, and more especially in the first stages of active, violent fever.

WHEN TO BATHE.

One should *not* bathe immediately before, nor immediately after a full meal. During the process of digestion, the system has enough to do without the labor of reacting from the effects of a bath. About three hours after breakfast is the best time, since the system is then in the most vigorous state and the meal is digested. But as that hour is inconvenient for many, three hours after supper will do very well.

WHERE TO BATHE.

In the house, and in a warm room. Some habitually bathe in the river, or in other streams, or bodies of water. My opinion, founded on close observation, is that it is a hazardous custom, especially so in malarious climates. Other things equal, the person who is so accustomed to bathe is far more than others subject to the diseases incident to a malarious country. The reason is this: around bodies or streams of water, malaria, or the poison which gives rise to malarious diseases, more abundantly originates, and especially of evenings more intensely accumulates than in most other localities.

It has often been proven by analysis that pure water placed in an impure atmosphere, itself becomes impure. Water is hence an *absorber* of atmospheric impurities. Therefore a

stream or a body of water situated in a malarial district will essentially become charged with malarial poison in a degree corresponding to its intensity in that locality. It has also been many times demonstrated that the skin is an absorbent as well as an exhalent. For example, sailors when destitute of fresh water wear their clothing wet with sea water, and their thirst in a measure is allayed. After a plaster of camphor or of onions has been worn on the skin, the odor may be perceived in the breath, and in certain secretions. The matter of small-pox rubbed on the skin will produce the disease. Hence the unsafety of bathing in water which is exposed to malaria; or which contains *any* organic impurity. It consequently follows that one should always bathe in a pure atmosphere, and in pure water.

HOW TO BATHE.

One excellent mode is to wash the whole person three times in succession with a wet towel, slightly wringing it out of clean pure water, with soap the first time; and of water the last two times, without soap; and to use last a brisk friction with a dry crash towel. This and the plunge bath are the best modes. Whichever is used, the act should be expeditiously performed, and immediately followed by dry friction—using a crash towel briskly and sufficiently long to produce an agreeable glow, and an elasticity of the whole body.

Bathing should always be followed by exercise for the purpose of throwing the blood well to the surface, thus assisting the system's favorable reaction; which reaction may always be known to be established by the agreeable warmth and glow.

The head as well as the body should be frequently washed, and the hair thoroughly dried with a towel.

Every one should beware of hair dyes. Many which the proprietors claim are innocent contain some salt of lead, or some other constituent which may poison the system, and cause unpleasant, serious, or dangerous results.

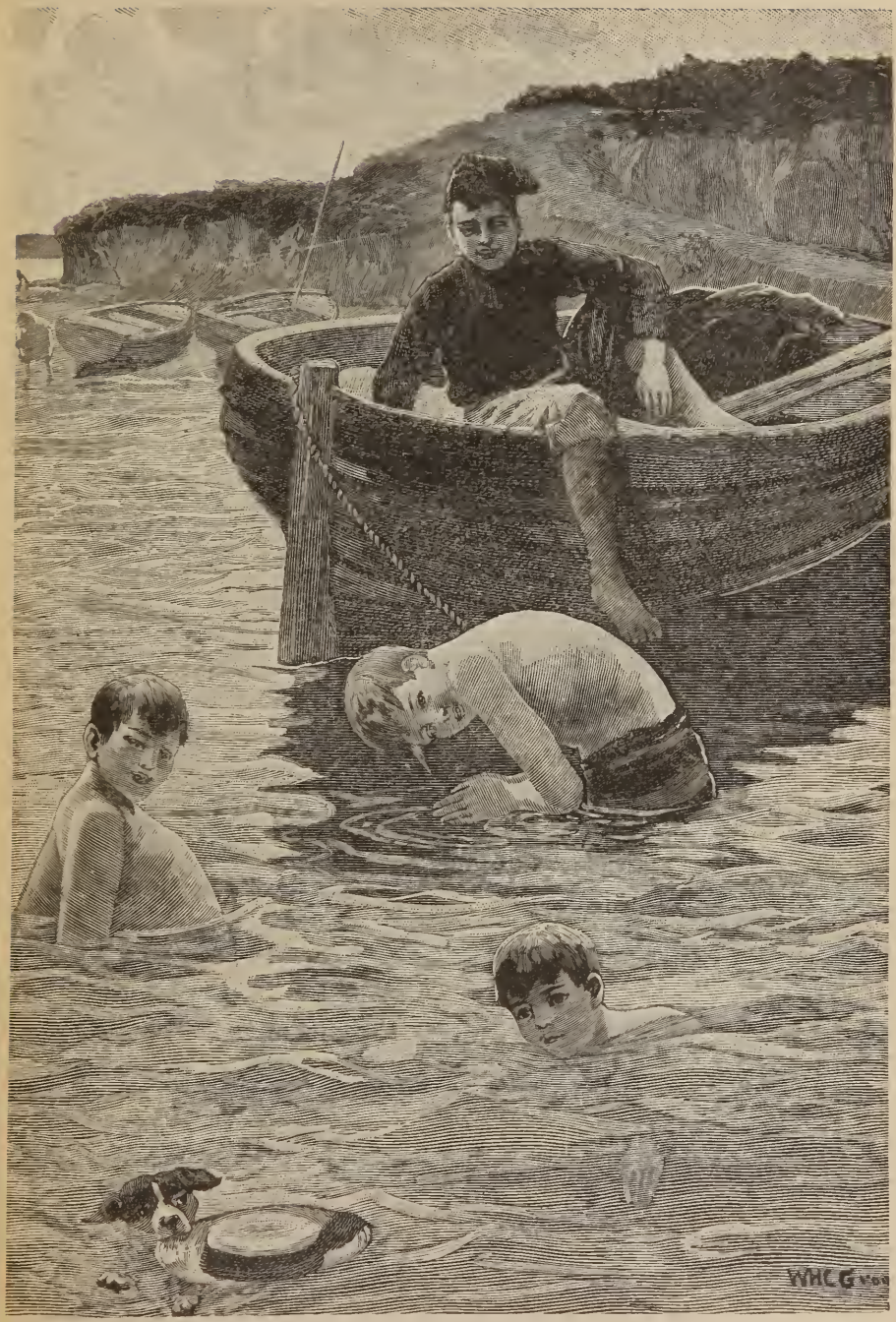
WARM, OR COLD WATER BATHS.

Many physicians indiscriminately recommend for *all*, old and young, healthy and weakly, cold water baths taken in a

cold room. I enter my strongest protest against this advice and the practice of it. In many cases I know it to be unwise, in the highest degree, and when followed by certain persons, the most unsatisfactory and dangerous results will follow. This can be proved by many examples. I give only one. When the writer was a young man, following the instructions of certain authors, he used cold water baths for a year or more. The baths were followed by an uncomfortable sensation of coldness and of stiffness. Health slowly declined. Ascribing this declension of health to unknown causes, a physician was consulted. "Do you bathe in cold water?" he asked. An affirmative answer being given, he said: "Here is the simple secret of all your ailments. Bathe in a warm room, with warm water." The advice was followed. Reaction came after the bath with a delicious glow, with nimbleness of body and limb; and health quickly returned. Since then I have known many similar cases; so many, indeed, that I know the sweeping advice, that all should bathe in a cold room with cold water, is *decidedly bad.*

The advocates of indiscriminate cold ablutions bathe their children with or in cold water to toughen them. After the children have grown into men and women, the men and women continue the same process in order to sustain physical hardiness—to raise their systems above and beyond the susceptibility of taking cold. All this on the theory, I suppose, that if a child or an adult survive shivering baths, they are invincible to atmospheric changes!

Universal safety demands that *every infant and child be bathed in a warm room and with warm water. This is always safe.* Every adult person should be his own judge as to the temperature of the water with which or in which he bathes; and his judgment should be guided by his own feelings after bathing. If his system quickly and perfectly reacts, with a pleasant warmth and glow, after using cold water, then cold water will do for him. Otherwise, *not.* Therefore the water for adults should be of that temperature which gives the bather the most agreeable sensations and comfort after using it.



A JOLLY BATH.

Persons who are subject to fits of fainting, giddiness, or unpleasant sensations about the heart, should never use cold water baths, nor use a plunge bath under any conditions, nor indeed bathe at all without consulting their physician.

THE VAPOR BATH often proves beneficial, when used at the commencement of a sudden cold, or an attack of most acute diseases, as fevers, pneumonia, etc. A convenient vapor bath may be had thus: place a pail containing boiling water under a cane-bottom chair; put a very hot brick into the water; let the patient sit in the chair; fasten a thick blanket around the patient's neck, and then spread it out so as to cover patient, chair, and pail. After a free action of the skin is produced, then let the surface of the body be well and quickly rubbed and dried, and the bather put to bed well covered.

Besides a general water-bath once or twice a week, a daily exposure of the undressed healthy person to the pure, moderately warm atmosphere for half an hour, is not only very grateful, but very healthful. If the air be combined with the mild rays of the sun, the effect is all the better. The atmosphere conveys away the impurities from the skin, the sun disinfects it.

Another excellent promoter of health, either in health or disease, is dry, daily friction with another's hand.

SUMMARY.—A bath should not be taken just before a full meal or sooner than two hours after it, nor when the person is physically or mentally exhausted, nor in any stream or body of water, if such water is situated in a malarious locality, nor during or just before menstruating. Pregnant women must use caution as to their baths.

A bath should be taken when the body is warm; in a warm room, and generally with warm water (salt is a good addition), two or three hours after breakfast, or just before going to bed;—whatever mode is used, the work should be done quickly, the body afterwards rubbed briskly, and active exercise taken immediately.

EXERCISE—REST—SLEEP.

Nature makes no provision for the sluggard. Man was calculated for industrious activity, portrayed in the mysterious connection and the perfect adaptation of the complex nervous system with its subtle nervous stimuli, as they move the muscles in thousands of variations, in the tremendous enginery of the heart in its perpetual rhythmic pulsations, and in the activity of the mind through the brain in all its vaulting ambitions, and uncircumscribed sovereignty.

Since the voluntary movements of the body, and every part of the body, are produced by the muscles through the influence of the nervous stimuli, the muscles are called organs of motion. They consist of bundles of fibres inclosed in thin membranes with the connections.

The nervous stimulus is the power or force that moves the muscles, as steam is the power that moves the engine; but of what it really consists is not known. It is not electricity at least in its ordinary form; perhaps it may be a *vitalized* electricity.

The muscles may be divided into three classes, viz.: the voluntary, the involuntary, and the mixed.

THE VOLUNTARY MUSCLES are those which execute movements primarily under the influence of the will; or in other words the will has the power to bring the nervous stimulus into definite action, the function of which is to contract and expand muscles, which sets the intended part or parts, or the whole body into motion. Under this class are those of the limbs, etc.

THE INVOLUNTARY MUSCLES are those which act under the influence of certain nervous, vital stimuli, independent of the will. The heart is a striking example of this class.

THE MIXED VARIETY are those which move in obedience of the will, and also independently of the will; as those which move the chest in respiration: thus we *can* breathe by *willing*, and we *do* breathe without it.

THE INVOLUNTARY AND MIXED MUSCLES work incessantly as long as life lasts and weary not. Their action fortunately is

placed in a safe degree beyond human control. Thus the digestive organs *will* digest and assimilate our food; the lungs will inhale air to purify the blood, and exhale the carbonic acid and water; the heart moves perpetually on in pumping the blood to the lungs to be purified, and to all parts of the system to give the requisite nourishment; the secerning apparatus are faithful scavengers forever at work in carrying off the worn-out material of our bodies. All these whether we *will* or not. That *those* organs may perfectly perform their functions, the perfect Architect of our being has evidently designed that we keep this complicated machinery in good running order.

EXERCISE.—The voluntary muscles need alternate exercise and rest. Indeed, the inexorable law of our organic nature demands voluntary action. Why, do you ask? The body is composed of various tissues, as bone, brain, muscle, heart, lungs, etc. These tissues are composed of numberless minute cells, which live a certain time and then decay, and then are removed from the body by the lungs, kidneys, skin, etc. It is evident there must be a constant renewal of tissue—of these cells—to take the place of the old. This renewal is of course supplied primarily by the food, and ultimately and directly by the blood which the food produces. While the blood flows to every part of the body, the tissues select their appropriate nutriment from it, and return to it the above mentioned used-up material which is conveyed from the body. This process of decay of molecules is more rapid when the body or any organ of the body is active; and so is the process of renewal to balance the waste. In children, renewal *over*-balances the waste, and hence the growth. In the healthy adult also there is more new material added than old taken away by regular alternate exercise and rest, and the muscles grow stronger, firmer, larger. These rapid processes of waste and renewal which attend appropriate exercise have been found to greatly conduce to the health and vigor of all the organs of the body.

On the other hand, bodily inactivity causes sluggish digestion, sluggish circulation of the blood, imperfect oxidation of this nutrient fluid, accumulation in the system of effete products,

nervous prostration, softness and weakness of the muscles, ill health. Thus proper action of the brain strengthens the intellect, inaction enfeebles it. Proper action of the voluntary muscles adds to their size and strength; inaction enervates them. The proper use of the eye gives to it perfection; inaction, imperfection. Nature indeed goes about the work of obliterating those organs which we refuse or neglect to use. Fish outside of the Mammoth Cave have keen eyes, and a vast range of vision; while those from the river within the cave are totally blind: a condign punishment for living in darkness and inactivity of vision. Thus nature declares the inactive unfit to survive, and pronounces this resulting death.

The man or woman who is in harmony with nature's laws and to whom life is earnest, is far from envying him who lives a life without occupation, or her whose whole employment is to give and receive fashionable calls, and spend the night in splendid balls, or grand receptions.

REST.—Hoping the reader is convinced of the utility of regular, judicious, well-directed exercise, such as shall excite and quicken the circulation, and such as shall put new and increased vitality and force into all the organs of the body, we proceed to state that nature never designed us for *perpetual* toil. Many in this age make far too much haste to get rich or great. They use their muscular or their mental powers to such excess, that at the age of thirty-five to fifty they are wrecks. The blame for such wrecks can be often traced as far back as the school-room.

Let then the over-industrious keep in remembrance the fact that physical or mental exercise may be carried to that extreme as not only to totally defeat all beneficial results, but as totally to undermine the constitution or the intellect. While a healthy, robust person may perform every day ten hours of manual labor, or eight hours of mental labor with hygienic advantage, much more than that may be injurious, or ruinous. One may dance from nine to twelve o'clock, and feel the better for it; not so, however, if the dance continues until daylight. Manual and mental activity continued to the stage of exhaus-

tion is harmful in that the waste will exceed the nutrition. Hence the injurious effects upon the part or organ over-exercised. If such exhaustive labor be continued beyond certain limits, or repeated daily for a long time together, enfeebled vitality and disease will be the result. Nature imposes surely certain laws which cannot be transgressed without a penalty. Imperative nature demands alternate judicious activity, rest, recreation, sleep.

The question is, what is a proper amount of daily exercise and of rest? The answer to this question must in a great degree depend upon the physical vigor of the person, and upon the business he follows. For example: while one sedentary person may walk five miles with only slight fatigue, which soon wears off, leaving still more elasticity and vigor behind; one mile will entirely exhaust, stiffen, and lame another, causing absolute injury instead of good. For a laboring man, ten hours of work, six hours for meals, rest and recreation, and eight hours of sleep, are, I think, fair average needs of a healthy person. For a sedentary man two hours of open air exercise, regularly every day, will do very well: for a woman a little less, perhaps, will do. But the sedentary as a rule do not take half the exercise they need; and women, not quarter; and ill health in some of its varied forms, and consumption especially, are the too frequent consequences.

Modes of Exercise.—That mode of exercise is most beneficial, other things equal, which brings into activity the greatest number of muscles. In the varied sports of boys, all the muscles often come into active service; and if sufficient and well directed freedom be allowed, boys will under favorable circumstances generally grow into an erect and robust manhood. Not so with girls. Custom seems to require them to play quietly—*so* quietly, lest they be called romps. They are not allowed, in full glee, to expand their chests with the vitalizing atmosphere as freely as boys. If they dare to make an attempt at shouting, the shouting is in the minor key. After knowing, as the reader does, the great value of appropriate exercise, and the ill consequences of inactivity, he will not greatly wonder

that this inert, or restrained mode of girl's physical education results so often in stooped shoulders, deformed spines, and a general ineffaceable delicacy. Girls as much as boys should have the freedom of health-giving sports: adapted, of course to their finer fibre and acuteness of sensibility, yet active, open air, vivacious sports. Neither they nor boys, for reasons already given, should be allowed to over-do themselves, and become exhausted in the pursuit of fun. In the absence of precaution in this respect, gymnasiums are often a source of much mischief. For unless the exercises are adapted to individual endurance, the already robust will gain in health, agility and vigor, and the weakly will be made still more weakly, the sickly, still more sickly.

Remember that children, especially delicate children, may over-play, and *be* over-worked. But let not this fact so frighten the anxious mother who has a delicate child, as to cause her to refuse out-door sport. Feeble, quiet in-door play can never infuse vigor into the muscles, energy into the brain, nor health into the constitution of any boy or girl. A potato will indeed sprout and grow in a dark cellar—you have seen it, and observed its sickly hue, and total want of hardiness. Have you extended your observation to children with regard to *where* and *how they* grow? Then you have seen that those who have been almost constantly reared in darkened rooms—who have had but a house exercise—have grown up (if fortunately they have grown up), very much as a potato does in the dark cellar. Every child essentially needs exercise—regular, brisk, yet prudent; exhilarating, yet not too long continued exercise in the open air and sunshine—the kind and amount of it to be directed by the judgment of a wise and judicious mother.

Exercise for Women.—Many young girls commence when children a life of inactivity at home and at school, and when they become women, they have delicate health or ruined constitutions. Many women, I am sorry to say, are indolent and rich. They are indeed so destitute of physical life that they "*could* not think" of walking to the house of the nearest neighbor. Their voluntary muscles so unused to activity; their in-

voluntary muscles, and all the organs of the body in sympathy, perform their functions but *feebly*. Languid eyes, headache, delicate health, serious disease, early death are all nature's ways of irrepressible reaction. All those fair beings really do have limbs and muscles, but they use them not. They have eyes, yet they see not their eternal interests. They *can* walk and ride and breathe the limpid air that the pure heavens so freely offer them, but they will not. They can be awake, vivacious, but if they are, all is artificial. They can even be healthy and robust, but that is vulgar. They can be women whom the best and the greatest of the earth might delight to honor and to love; *will* they?

Blessed be the woman who is poor and is obliged to work. More blessed still is she who is rich and yet delights in activity, and to live in harmony with all sanitary laws; her days shall be long upon the fair earth.

EXERCISE FOR MEN.—The exercise for laboring men has already received a hint. It has also been stated that persons whose exercise is in-doors ought to take daily at least two hours of exercise in the open air. It is of much importance to vary that exercise as often as possible, as walking one day, riding the next, playing some game the next, etc. This will bring into activity the various muscles of the body. After one has arrived at the middle age of life, the more violent kinds of exercise usually cannot be *safely* taken, as they give too great a strain upon the heart and bloodvessels, which have undergone a change. By all means out-door exercise between the age of forty and fifty should be most assiduously continued, since at these ages there is generally more or less failing of the vital organs, and they should by every means in the power of man be sustained.

When old age is upon one, his exercise should indeed be regularly continued, but the kind of exercise must be prudently selected; because at this period of life changes in the heart and bloodvessels have still further progressed, and render brisk motion, or intense mental application, still more unsafe than at the age of fifty. Hence the old man's exercise of body and mind

should be moderate, discreet, and discontinued within the limits of fatigue.

Even when the time of decrepitude comes, some possible exercise should be persisted in.

Variety of Exercise.—For young or old, exercise should often be varied, because in activity *all* the muscles are not equally active. For example, the muscles of a blacksmith's arms are in vigorous activity when wielding a sledge-hammer, and the waste of those muscles, during so violent motion, being greater than the renewal, they soon need rest; and rest may be had by a change of motion. The man who is sawing wood may in the same way rest by bringing other muscles into action, as by splitting for a while. The person who rides until he feels wearied may rest himself by a short walk. The student who has wearied his brain over a mathematical problem finds rest by turning his attention to some other study that calls into activity other faculties of his mind.

Again some employments do not call into activity certain sets of muscles, while certain other sets are the real workers. When such is the case, one should be at special pains to give the idle muscles healthy stated exercise. Brain-workers should not only often change the objects, and course of thought, as a source of rest, but also remember the physical well-being in well-directed and oft repeated physical exercise and recreation. The recreation, to be most highly valuable, should be pleasurable.

Let us reiterate that whether exercise be for pleasure or for profit, for the young or for the old, it may be safely carried to slight fatigue, but not to full exhaustion. For if exhaustive exercise be habitually repeated, the constitution will sooner or later suffer, and life be shortened. Statistics show that life is shortest in any given vocation with those whose labors are severest beyond prudent labor; that the health and the lives of the young are, during their rapid growth, often endangered by overplay or overwork; and that children often do overplay and often are overworked.

If one at any age be restless through the night, and unrefreshed in the morning, on account of excessive exercise, he



EXERCISE IN THE OPEN AIR.

knows the remedy. Remember I am not advocating indolence. Indeed, from the cradle to the grave, judicious and varied exercise should be daily taken, such as will bring into activity as many of the muscles as possible. Physical and mental activity should go hand in hand; and the one should neither suffer nor thrive at the expense of the other. Equilibrium, absolute justice to every part of man's organism and intellect, is the eternal law.

Fresh Air during Exercise.—As before stated, exercise accelerates the movement of the blood, and is attended by an increased waste to the organism, somewhat proportionate to the violence of the exercise. The amount of carbonic acid exhaled from the lungs is greatly increased during exercise, and therefore the supply of the oxygen to the lungs and blood must be also increased in the same ratio. The system feeling the need of a larger amount of oxygen, respiration becomes proportionately rapid. Hence the necessity of making ample provision for the extra amount of oxygen; that is to say, an abundance of pure air during exercise. Those who labor within doors, and the owners of the buildings, should heed this necessity.

Food and Exercise.—The union of the respired atmospheric oxygen with the carbon and hydrogen of the blood produces heat. The union of oxygen with the carbon of wood or coal also produces heat. Carbonic acid, water, etc., are the products of combustion in both cases. The heat-producing process going on in the animal economy is, therefore, analogous to that of a common fire. As the carbon which is burned for the purpose of sustaining the proper temperature of a room is contained in fuel, so the carbon which is burned in the animal system for the purpose of sustaining its normal warmth is contained in food. As exercise accelerates the union of oxygen with the carbon of the blood originally contained in the food—or, in other words, since exercise increases the process of combustion—it follows that exercise augments the warmth of the body, and increases the consumption and demand for heat-producing food. We draw the practical lesson, that he who

leads an active life requires more food than the idle; that the idle, or he who rests for a single day, should not partake of as much food as he would and should during manual or intellectual activity.

Position.—While walking, the person should be erect, the shoulders thrown back, the chest somewhat forward, the arms allowed to swing naturally at the sides. In whatever one is engaged, so far as the nature of the employment will permit, a similar position should be maintained, and fully resumed as soon as expedient. Children should be taught this when very young, and if at any time they are inclined to assume a stoop-shouldered position, it is the duty of parents to inculcate the necessary instruction relative to position, with all the interest that health is worth, until the lesson is practically and permanently learned. The habit of carrying burdens on their heads makes Hindoo girls erect and graceful. They have so perfected the habit that they are able to carry water in earthen vessels by this mode, as safely as a man can in a pail by hand. Besides erectness of figure, this practice strengthens the muscles of the neck and back, and develops the chest. American girls and boys would do well to adopt a similar training.

Time for Exercise.—The notion extensively prevails that the most proper time for open air exercise is during the morning, fasting. Emphatically it *is not;* especially not in malarial districts, nor, indeed, in *any* district when disease is prevailing. The human system is illy prepared for exposure to disease when it needs food, and the reason is too self-evident to require explanation.

Mental Exercise.—Much that has been written in this chapter concerning corporeal exercise will as well apply to intellectual activity. The act of thinking enlarges, strengthens, and conduces to the health of the brain and the mental faculties, as physical exercise does to the muscles and other organs of the body. Every studied thought makes a greater thought more possible, and more methodical.

The young man, after receiving a thorough education at the schools, goes out in the great world, enters and pursues some

vocation, apparently forgetting, after a time, much that he learned in his college days. It is often asked, "What good has all his education done him?" It has done him a great deal of good. The diligent study of those years was all the time cultivating, strengthening, enlarging his mental faculties. He may have forgotten many Latin words; he has not forgotten the discipline the study of them gave him. He may have forgotten the geometrical demonstrations; he has not forgotten their logic. Indeed, all the knowledge and culture he acquired from those old studies, and which he may believe are lost to memory, have prepared him for a wide range of forcible, methodical thought; and still live, and will forever, in the chambers of his brain.

It may, therefore, be stated as a well-established fact, that the hygienic road to perfect physical development takes its way through regular, appropriate physical exercise; that the only road to the best culture and development of the mind is early, regular, methodical, persistent study and thought; that no man or woman can reach the highest and best without thorough physical *and* intellectual culture.

RECAPITULATION.—Exercise accelerates the flow of blood; causes a more rapid waste and repair of tissue. In consequence more carbonic acid must, in a given time, flow from the system through the lungs, and a corresponding increase of air must be respired. Hence exercise should be taken where pure air is abundant. Regular, judicious exercise, alternated by rest, increases both the volume and force of the muscles, and the health of all the organs. Mental activity and alternate rest augments the health, the usefulness, and the force of the intellect. Those forms of exercise are the best promoters of health, vigor and symmetry which call into action the greatest number of muscles. Among the different modes of physical activity, walking in quest of pleasure stands pre-eminent. Riding on horseback is exhilarating and healthful. Exercise should be energetic, yet not violent, nor continued to exhaustion. Whether at work or play, it should carry with it some interesting mental stimulant; should be habitual and regular.

Do not over-exercise or under-exercise. Activity and alternate rest of body and mind most perfectly repair, enlarge and cultivate the whole being.

SLEEP.

"We are such stuff
As dreams are made of, and our little life
Is rounded with a sleep."

The activity of the brain undergoes a periodical suspension, which is called sleep. Sleep is the "Dear mother of fresh thoughts and joyous health." As mental exercise is beneficial, so sleep is a daily necessity. The necessity arises from the expenditure of power during mental or physical activity, and the consequent waste of tissue throughout the entire system of man, especially of the nervous system, and the substance of the brain itself. Nutritive regeneration and the sustenance of health demand absolute repose. *Perfect sleep is perfect brain rest.*

In sound sleep, the state of a person, so far as can be discerned from external appearances, is that of complete unconsciousness. Some physiologists are of the opinion that during the profoundest slumber, certain *internal* operations of the brain manifest themselves to the sleeper in the form of that uncertain consciousness called dreams, although the dreams may not be remembered. Others believe that dreams are indicative of imperfect sleep, and that therefore to dream during sound slumber is a mental impossibility.

Sleep has a periodical tendency, as is shown by one's sense of irresistible sleepiness after having been awake for the great proportion of the twenty-four hours. Indeed, if the condition of the brain and nervous system is normal, sleep *will* supervene after a certain length of time, even amid the most intense excitement; as during the heat of battle.

How MUCH SLEEP does man need? There can be no well-defined statement as to the number of hours all persons indiscriminately should sleep, any more than the number of ounces all should eat in the twenty-four hours. Frederic the Great it is said required only five hours of the twenty-four for sleep. Some writers have taken for their basis a few brilliant men who

were short sleepers, like Frederic the Great, and drawn the sweeping conclusion that no man needs more than they; and that if one sleeps more than this, it is through habit or laziness. There can be no question that the influence of habit often bears on the protraction or abbreviation of the period which many *do* sleep. Neither can there be a question that the organization, temperament, and the consequent physical and mental activity, age, etc., have much to do as to the number of hours in the twenty-four that one *ought* to sleep.

As regards temperament, persons in whom the *bilious temperament* predominates, especially if hearty eaters and good digesters, feel the need of eight to nine hours sleep. Those of *lymphatic temperament*, though they live slowly, think slowly, and are not much moved by surrounding circumstances, sleep a great deal; yet their sleep does not seem so much demanded by a tired and wasted system calling for renewal, as by the listlessness and dullness of their nervous systems. The nervous systems of those in whom the *nervous temperament* predominates are the most active, and hence it would seem that such persons would require more sleep than others; but they seem to require and certainly take less. Their nutritive regeneration is probably rapid, and the slumber is perfect and profound; they probably make up in quality what they lose in time.

Age.—The infant requires much sleep, owing to the change from intra-uterine to an extra-uterine life, and in proportion to the weight of the body to the more rapid growth than at any other period of life. This amount growing less, as the *need* of sleep grows less, the child at a few years of age needs only the night for repose. The young man or woman when the growth is completed, and onward to old age, requires still less sleep—the amount only that is necessary to repair the actual waste of the system that organic, physical and mental activity has produced, and which repose renews. In old age, when the mind and body are less active than in earlier life, of course less sleep is required for this renewal. In extreme and decrepit old age, however, a man is often a child again, in this as in other respects.

The waste of the system goes on slowly during moderate mental or physical labor, and more rapidly as the activity is increased, and in about the same proportion. After a day's intense intellectual or manual labor, there is therefore necessity for longer repose.

The reader will see that the length of time persons should daily spend in bed depends on various circumstances; many more, indeed, than those mentioned. It is of great importance that each should know the amount of sleep he or she actually needs. If too *little* is habitually taken, the constitution, and especially the nervous system and brain, will gradually be undermined and wrecked, because the repair of the system which it is the business of sleep to make is less than the organic waste. Thus many enthusiastic students and business men prolong study or business too far in the night, feeling that they cannot afford to spend much time for rest or repose. Presently they begin to suffer from headache, throbbing of the temples, heat and tightness about the head. These are warnings that nature throws out, presaging danger, and if these warnings are not heeded, sleeplessness, inflammation of the brain, apoplexy, insanity, or softening of the brain will probably be the consequence.

Excess of sleep is to the nervous system and brain what over-feeding the stomach with food is to the whole body, and the digestive apparatus. Either over-eating or too much sleep will cause dulness of perception. If persevered in, the one may result in permanent ill health or death; and the other in derangement of the nervous centres, premature old age or early death.

How is one to know how much sleep he needs? The amount of sleep should, every night, be sufficient to re-supply all loss of organic power which has resulted during the previous day, from organic, physical and mental action. If either too little or too much sleep is taken, the system will utter a natural protesting cry. The following may be stated as a reliable rule, which every person should at once learn, to wit: find out by experience how many hours of sleep at night will cause the most healthful and

vivacious feelings the next day: that is the time which ought to be spent in repose. None will require less than five hours; few less than six; the great majority from seven to nine hours. It should however always be remembered that children need more sleep than adults, and infants more than older children. They cannot judge for themselves.

POSITION during sleep.—When in bed, a change of position is allowable—a bent or coiled position never. One should go to sleep on the right side, for this places the stomach in a position to facilitate emptying its contents during the digestive process. While sleeping, for reasons that will appear elsewhere, every one should learn to keep the mouth closed. This may usually be done by slightly bending the chin towards the chest, before going to sleep.

SLEEPING TOGETHER.—It is, as a rule, unwise and detrimental to health for two persons to sleep together. 1st. Because, from the proximity of their persons, the atmosphere under the bedding must essentially be rendered doubly impure by the exhalations from the skin, and the carbonic acid from the lungs of two will doubly contaminate the atmosphere of the room. 2d. If one bedfellow thrives, the other is very likely to suffer, because the former absorbs more or less of the nervous force, health, vigor, vitality from the latter. On a similar basis the opinion is well founded that it is especially bad for children to sleep with old people. 3d. If the husband and wife habitually sleep together, the danger seems great that their personal magnetism, which ought to be mutual and harmonious, yet not alike, and which constitutes the very soul of love in married life, will, in a greater or less degree, become equalized, neutralized and destroyed.

Besides both man and woman appreciate tasteful dress, and a presentable personal appearance. The night-dress and cap, disordered hair, snoring, etc., are not calculated to produce the most pleasing effect, but perform a part in destroying the sweet attractive forces between the sexes.

The practice adopted by some married pairs of occupying separate beds in the same room is an improvement upon the

general practice, and should be a general custom of those who will not adopt the better way of occupying two rooms, as well as two beds.

Some persons have the power to go to sleep at will; others to awaken at any hour they choose; while with others, if they wish to arise at a certain hour, a state of restlessness is induced, or they awaken many times, and when the appointed hour actually arrives, they will quite likely be sound asleep. Many who are accustomed to rise at a certain hour in the morning wake regularly at that hour, without reference to the time they went to bed. The fact that they have spontaneously awakened is no proof that they have slept sufficiently long. This, and the frequent interruption of sleep through the night, not only shortens the time one should repose, but also deleteriously affect the heart, nervous system and brain, in proportion to the actual loss of sleep and the hardiness of the person. Therefore the sick should not, as a rule, be frequently awakened at night, unless there is some *immediate* object to be gained by medicine. Good slumber will repair the system better and do more good than repeated interruption of sleep for the purpose of dosing.

Sleeplessness.—A word is appropriate concerning the sleeplessness of those whose brains are overwrought with the friction of business, or with purely mental labor. In certain states of the nerve centres induced by the above causes, there may be an entire absence of sleep for many days, and even weeks together. This means the beginning of disease of the brain or its membranes, or incipient insanity. If the sleeplessness is not remedied, the disease will progress with a quickness and intensity somewhat in the proportion that the *destructive* processes in the brain exceed the *constructive*. This excess of the destruction over the construction will vary according to the deficiency of sleep, and the toughness of the man. The practical lesson to be here deduced is this: if a business man or a student, after laborious mental labor, has headache, tension, heat, or other unpleasant sensations of the head, and if on retiring he finds it difficult to go to sleep, he may understand that these are



NOW LOOK HERE, YOU THREE—TIME TO GET UP.

monitors ever faithful in their duty to give warning of approaching danger. If not obeyed by taking the sleep and mental repose for which those monitors so loudly call, sooner or later sleep will probably so far forsake him, that the moment his head touches the pillow, thought will move with the greatest activity, as if determined not to be enchained by the hand of Morpheus. The nervous system and brain thus cheated out of their needed reparation or renewal, will suffer the consequence, and the consequence may be apoplexy, inflammation or softening of the brain, mental imbecility or insanity.

The fearfulness of this impending danger is sufficient to arouse a man thus threatened to seek a remedy. The remedy chiefly consists in two things: 1st. His business and his profound thinking must be discontinued. 2d. Sufficient regular sleep must be obtained. The great question is, how can these remedies be effectually brought to one's relief? 1st. Of the first, it might seem to those who have not had the experience, that it would be an easy matter for a man to discontinue his intensity of thought in regard to his business. Not so, however. Yet it *must* be done. *Continued absorbing mental activity will not do.* In the best way he can he must seek absolute intellectual repose so far as his business or studies are concerned. Such a man *will* think, and there is no helping it; but he must not think of the *business* matters, or the *educating* matters which have brought him to his present condition. If that cannot be by indulging in pleasant physical and intellectual home recreations, he must go abroad.

2. How is a sufficient and regular sleep to be obtained? The necessity for sleep arises from the wear of the whole system, and especially of the nervous system. When all the machinery of the human organism runs along smoothly, as in grooves, which it *will* if every part of the machinery is kept in running order, sleep will take place as naturally as digestion, or the pulsations of the heart. Therefore the preservation of health is the great idea in procuring sufficient repose. The most important particular in this relation is a proper and well-regulated exercise of the body and mind.

When mental or physical exercise has been crowded to that prolonged intensity as to produce the condition of the brain in which it is difficult or impossible to procure sufficient repose, a man must adroitly and assiduously woo the fair goddess of the night, until she embraces and lulls "him soft asleep." In order to make a success of one's wooing, he may be obliged to use in succession several expedients, and a ruse or two. 1. Special regard to the sleeping-room should be had. It should be spacious and well ventilated, and kept in winter at a temperature of about 50°. The bed should be easy, the head of it raised a little. 2. Special surroundings are of advantage, as darkness and stillness, the sound of a distant waterfall, or the monotonous voice of a poor reader on a dull subject. 3. Gentle friction by another's hand; or sponging the forehead with cold water. 4. Certain mental states, such as holding the eyes unchangingly in one direction, thinking of nothing but to keep them open, and to keep from winking; and generally one will catch himself taking an occasional long sleepy wink, a prelude to a sweet repose. Or one may slowly count from one to a hundred, and then from a hundred to one; to be a few times repeated. Or imagine he sees his own breath passing from his nostrils, and floating away in the air. All of these have a greater or less tendency to withdraw the thoughts from interesting subjects, and to place them in the tranquillity of mechanical repetition, and a consequent repose. Sleep may also be frequently induced by a strong previous expectation of it; or a certain assurance that one will go to sleep. The sleepless must not feel too anxious, nor make too great mental effort to sleep. The solicitude itself will conquer the effort. Let the subject of sleeplessness go to bed, and place himself in an easy position, and say to himself, "I'm here, and let me sleep, or keep awake, just as I'm a mind to;" and often he has the mind to go to sleep. 4. "Eat *two* mince-pies for supper, and you will dream of your *great*-grandmother," advised a physician when consulted by a man who ate *one* mince-pie nightly, and dreamed of his grandmother. Let the victim of sleeplessness remember this advice and eat, not mince-pies for supper, but light, easily digestible food, and take *early* suppers.

LOCATION AND CONSTRUCTION OF THE HOUSE.

Viewed either in the light of comfort or of health, this is a subject of great importance. While space will not permit its full treatment, I still hope to give hints which will prove useful; some of the points here referred to will receive closer attention in other places.

According to statistics the average yearly death-rate of the city of London was 80 per 1,000 of the inhabitants during the seventeenth century; during the eighteenth century 50 to 1,000; and since 1836 only 24 per 1,000. Such are the splendid results of improving sanitation. Not all of this great reduction in mortality is owing to the improved construction of houses, drains and ventilation, but that much of it is, there is not the slightest room for doubt.

In the seventeenth century the houses were more often built on damp grounds, the walls destitute of air-spaces, the windows few and small, ventilation and drainage wretchedly defective, the chimneys smoky, the ceilings low, the rooms over-crowded with inmates, and possessing many other unsanitary defects. In later years practical hygiene has passed her silver wand over many of those old rude abodes, and transformed them into healthy homes. The stagnant swamp near by has been filled; wet places have been made dry by thorough drainage; the foundations of walls of houses have a damp-proof course to arrest the ascension of dampness; the outside walls of the buildings are hollow, to further ensure dryness; the rooms are as lofty and spacious as is consistent with the means of the owner; the windows are large and reach nearly to the ceiling; the ventilation is as perfect as the present state of sanitary science can make it,—such are the contrasts between the old and the new.

Pestilence should rigidly be prevented by the authorities. Not only in London, but in New York, and all over America, there are still millions of rickety cottages filled with reeking pestilence, which should be razed to the ground. Others that replace them should be kept in a wholesome condition by the

authorities, if need be. Not every one can be rich, but every one who is really human can, and ought to be, *clean*. "What right," it may be asked, "have the authorities to compel owners of houses to keep them and their surroundings clean?" What right has one family, through its abominable filth, to send into another family an infectious disease armed with the fangs of death? The authorities have the same right to prevent it, that they have to arrest an assassin. Is it more villainous to make a clean cut to the heart with the keen blade of a knife, than to poison one with most horrible filth? For the same reasons, "the powers that be" have a rightful authority to cause residences, public buildings, factories, and work-shops to be constructed according to sanitary laws, and they should, in every needful case, use their authority. To build thus costs the owner very little more than a hap-hazard manner, and how much better the result for the owner and his neighbors! Men have strange notions of freedom, but this matter resolves itself into this: authority for the good of the people; or interminable pestilential diseases.

Some of the details of sanitary house or home-building may be explained a little more definitely.

THE SITE.

1. Many, especially in cities, cannot of course select the most healthy building grounds; nevertheless they can remove some grave dangers, the chief of which are wetness, filthiness of the soil, or malarial surroundings. 1. If the soil is wet, it should be drained to dryness; if that cannot be done, the location should be rejected, for your home will breed rheumatism, consumption, etc. 2. Certain localities in cities have been raised to grade, by throwing in rubbish and covering it up with dirt. While this rubbish is in a state of decomposition, these places are extremely unhealthy, and should not be built upon before three or four years have elapsed after such grounds are made up. 3. Sites for houses should not be chosen in peculiarly malarious localities; as near a sluggish, dirty river, or swamp, or hollow, or a grave-yard. If unfortunately they must be thus

unfavorably located, a grove of trees situated between the source of sickness and the house will somewhat be a safeguard. Even then caution should be used in going beyond those trees after sunset and before sunrise. Trees have a tendency to render the air in their vicinity salubrious, in that they absorb more carbonic acid from the air than they give back; and they accumulate malaria. Under trees is not salubrious from the fact that they do accumulate malaria, and therefore they should not be placed too near the house. They should not for two other reasons shade the house; they exclude the sunshine and the shade causes dampness.

THE COUNTRY is, as a rule, healthier than the city; the extreme limits of the city, other things being equal, are healthier than its interior. Narrow streets are objectionable, and for a reason that trees are when placed too near the house, shade instead of sunshine.

There should be at least a small garden space back of every house, and a pretty lawn in front is desirable.

Every house should be so situated that an abundance of *pure* water may be obtained.

CONSTRUCTION.

I consider it best to leave the subject of the architectural beauty of houses to the architects, who, I am sorry to say, give far more attention to the ornamental than to the healthful. The beautiful should not by any means be overlooked nor underrated, when we are making our homes. A house constructed with some taste need not cost much more than a gloomy prison-like house; and how much more a *home* it is for our wives and children! Many pay far too little regard to this, and much less to a healthful construction. Indeed the expectancy of long life cannot be very great in some of our *modern* houses,—even in some of the elegant ones.

DAMPNESS.—In the construction of a healthy house a great object should be to secure its dryness during all seasons, and in all kinds of weather. A house made of wood permits more *air* and less *wet* to pass through its walls, than does one of brick or

stone. Since dampness of the house is bad, and a permeability of the walls to a certain amount of air is rather beneficial than otherwise, a residence made of wood is more healthy than one of brick or stone.

Before commencing a house, the first thing should be to have before your builders the plans and specifications for heating, ventilation, water-supply, drainage, and construction of the house itself, and then have all these details conformed to as the work progresses.

The work should begin with the cellar. Here let it be stated that every house should have a cellar under its entire length—not for a kitchen, nor to store vegetables in to any great extent, but to make dryness possible.

The first thing after the cellar is excavated is to make the cellar wall. The wall should be made strong enough to firmly support the superstructure. There should be laid a damp-proof course a couple of feet above the level of the outside ground, and under the floor joists, for the purpose of preventing dampness from ascending the walls into the house, and to preserve the soundness of the joists. This course should extend completely around the outside wall, and may be made of vitrified stoneware tiles, perforated to secure ventilation, or of three courses of slate laid in cement, or of perforated bricks. If preferred, a double wall may be built, an air-space left between, and the two walls united and supported by stretching bricks from one to the other. The bottom of the space between the two walls should be concreted; and free ventilation given, in the outer wall, and above the ground, or else stagnant foul air may accumulate in the open space, and find its way into the house. In all cases, cellar foundations should be elevated sufficiently to make the first floor from two to four feet above the surface of the outside ground.

Every Cellar should be well supplied with windows, so as to assist in its ventilation.

It has been previously stated that the cellar should not, to any great extent, be used for storing vegetables, nor for a kitchen. Very little thought is generally given to the unhealthiness of so

common a thing as potatoes, apples, turnips, squashes, cabbages, etc., in the cellar. They are not altogether innocent even when sound; when decaying they are the source of much serious illness. The evil is sufficiently great when the assorting and removal of decayed material are attended to. But when this is not done, the rate of mortality caused by this putrid filth is beyond computation.

The basement as a kitchen is inconvenient, more or less unhealthy, unpleasant because odors arise to the rooms above, and the going up and down stairs are objectionable, and hurtful for women. A preferable place for the kitchen is in a wing built for that purpose in the rear of the house.

Having finished the foundation walls, the next thing is to pound into the cellar bottom a good layer of concrete composed of broken stone and cement; and over it to make a floor of cement. This will not only make an excellent floor, but also will prevent dampness, and the exhalation of gases. For it must be remembered that unprotected soil is permeable both to dampness and the gases.

THE WALLS.—The cellar completed, the walls of the house or superstructure are next to be constructed. Above all after strength, this *one* thing should be known and acted upon—*no house with solid walls can be free from dampness, and no damp house can be healthy.* It is strange that anything of so vital importance should so often be neglected. Indeed in many places hollow walls are the exception, and solid-wall houses the rule. No air-space is given within the walls of houses so made of brick or stone; and even those constructed of wood are bricked in, leaving no air-space between. What wonder that the mortality of the inmates is appalling, in spite of other hygienic arrangements and of doctors?

Let us a little more closely examine wall-making relative to tightness and dryness. 1. If the house is to be made of wood, let the frame-work first be raised; 2, cover the outside of the studding with building-paper; 3, nail clapboards over this paper; or, what is much better, one inch lumber so matched as to overlap and show on the surface as half-inch lumber; this

is very tight and excellent; and 4th, lath and plaster the inside of the studding. The outside walls constructed thus, you have an air-space within of a diameter equal to the width of the studding, and you have a warm, dry house.

To build of bricks, warmth and dryness should again be ensured. Experimenters inform us that a single brick will absorb from one-fourth to a pound of water, according to its softness and porosity. If, therefore, the walls are made solid, it will be utterly impossible to keep the wet out of the house, even if the walls are thick, unless they are coated over with some waterproof material, or unless the bricks are glazed. Even then it will not do, for the same material used to prevent wet from penetrating the walls from without will also prevent the dampness which will accumulate within from passing out; it must remain within, and make the walls wet after all. Professor Pentenkofer says that impervious walls in a house are like India rubber clothing: they will protect from the outside wet, and generate it from within.

It will thus be seen that double walls are not merely to be preferred to thick walls, but that they are really necessary to dryness. The two walls must of course be bound together by bricks, or galvanized iron wire laid at short spaces from one wall to the other. At intervals a perforated brick should be placed in the outer wall to ensure ventilation of the air-space. Walls constructed in this way render the house dry; also warm in winter and cool in summer.

I have a building, the walls of which are double, and the inside wall is furrowed and lathed, thus making another air-space. We thus have two air-spaces in the wall. Water does not freeze in the rooms, although there is no fire during the night, in the coldest winter weather, or when the mercury marks 20° below zero. The apartments are of course still drier than when there is only one air-space in the walls. This is the perfect mode of building brick walls, yet rather expensive.

CHIMNEYS should commence at the bottom of the cellar, and should have an aperture for the purpose of ventilating the cellar. Then it should have two flues—one for the smoke, and the other

lined with zinc to convey hot air to the upper stories, in case a furnace is used. Every living room and every sleeping room should have an open fire-place, as they are the best of all ventilators.

THE WINDOWS of the house should be large enough and numerous enough for an abundance of light. They should be made to open at the top and bottom. They should reach nearly to the ceiling; and the ceiling should be no less than ten feet from the floor.

THE LIVING AND SLEEPING ROOMS should be as capacious as the means of the proprietor will permit, if he be poor. He had better make his parlor small, or even have none, than to have the rooms small where his family spend the greater part of their lives. The utter want of consideration in this matter, and especially with reference to the sleeping rooms, is surprising. Bedrooms, even in mansions, are often so small that the bed and dressing-case nearly fill them. Adding thoughtlessness to folly, the bed is often encompassed by curtains, or placed in a recess. No sleeping room can be as healthy as it should be, which contains less than 1,000 cubic feet; and 2,000 cubic feet is far better; 15 feet long, 15 feet wide, and 12 feet to the ceiling is what it ought to be.

The reader, if he be poor, may say, "I am not able to have a large house;" and that may be true; but every one, however poor, if at all able to own a house, is able to have a dry, airy, sunshiny, and tidy house; and one that is not mostly *parlor*. Sanitary laws demand no less than that of every man.

FOUL AIR and contaminated water are the two chief foes to a healthy home. Drainage, water-supply and ventilation will receive particular attention elsewhere; as a prelude, however, let us here give two or three cautions. 1. If a furnace is to be used in the house, there should be no communication between the hot-air chambers and the cellar, because the heat causes an upward draft, which will draw the impure air of the cellar, and of the ground beneath and around, to the rooms above. Let the hot-air chambers be supplied entirely with out-door air through cold-air boxes.

2. If a well is to furnish the drinking water, let it stand on a higher level than any cess-pool, privy-vault, barn-yard, hog-yard, or pen, either on your own or your neighbor's premises; and at least fifty feet from any of those nuisances.

No Water-Closet or privy should have any communication with any apartment of the house. It may stand adjacent to the outside walls of the house, where it can be properly lighted and ventilated, with a sheltered walk leading to it; and on that side of the house favorable for the winds, during warm weather, to waft the odors *from* the house.

The Cistern requires thoughtful attention if used for the supply of drinking water. It should be walled with bricks or stones, and cemented. It should never be lined with lead, nor should the water be pumped through a lead-pipe. The overflow should not, in any way whatever, be connected with a drain. It should be tightly covered, but ventilated. The cover should be movable, so it can readily be taken off, and the cistern cleaned at least twice a year. The water should be well filtered before it is used for drinking purposes.

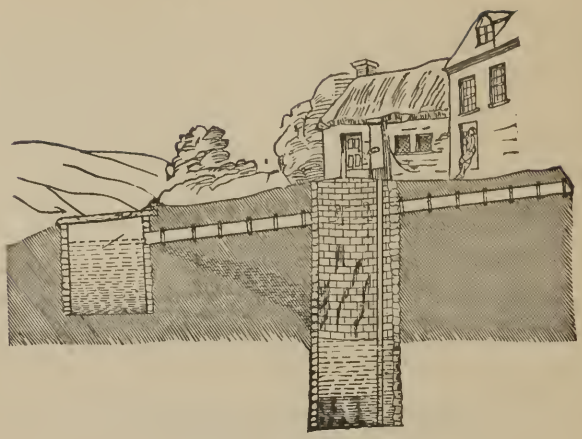
Papering the Walls of a house. It is more healthy not to paper them, for two reasons: 1. The paste by which the paper is made to adhere to the wall becomes in time more or less decomposed, which renders the air proportionally impure. If the rooms are papered, carbolic acid should be mixed with the paste as a preventive, or at least a retarder of decomposition. Always before re-papering, the old paper should be entirely removed, and the walls washed with solution of carbolic acid.

2. Wall papers are often colored with arsenic; some of which, especially the dark green papers, contain twenty grains of this poisonous mineral to the square foot of paper. When rooms are papered with such papers the poisonous colors become rubbed off in fine particles, which float in the air of the house, and are breathed by the inmates with no innocent effects. Many of the obstinate headaches, nausea, diarrhœa, and nervous affections, the causes of which are so obscure to the sufferers, may properly be ascribed to arsenic in the wall-papers. Too much care in regard to this poison cannot be used in the selection of

papers. A test for arsenical wall-paper that families can easily use will be valuable, and may save serious illness. It is as follows: Pour a little aqua ammonia on a piece of paper you wish to test. After a few minutes pour off this ammonia which was put on the paper, on a clean piece of glass; then drop into it a small piece of nitrate of silver. If a yellow precipitate forms around the piece of nitrate of silver, it indicates the presence of arsenic.

DOMESTIC DRAINAGE.

In large cities the disposal of slop-water and excretal matter is generally provided for through the sewer system. If all connections are well trapped, traps and pipes well ventilated, the sewage well disposed of at the terminal outlets, and if the plumbing is perfectly done, so as to stand the peppermint test, there is comparative safety if all are kept in good order. But what is to be done in towns, villages, small cities and country places in which a sewerage system cannot be had on account of the expense, and wells furnish the water-supply? This is the great problem that is hard to solve in such a manner as to be put in actual, practical and general operation. It is my intention to describe how the disposal in question can be made even in places destitute of a regular system of sewerage, and where wells furnish the water supply, so as to save the people from the poisonous and deadly effects of sewer gas and of polluted water. There is little to be gained by the description of any system whereby the people *may* or *might* be safe, unless they are aroused to their danger. To assist in awakening them, I have written a letter to Drs. Richardson and Hartshorne, of Philadelphia, describing the situation of many thousands of small cities all over the country in regard to these things. If the people are capable of being penetrated by the perception of danger, it seems to me that their letters will not be unavailing.



HOW PEOPLE DRINK SEWAGE.
(Teale's "Dangers to Health.")

For want of space, I can give only one of those letters, and shall precede that by my own to them, that his may be better understood:

"WATERLOO, IOWA,

"DEAR DOCTOR:—In many of our small towns there is no system of sewerage; wells furnish our water supply; and the old-fashioned privies and privy-vaults are almost universally used. These vaults are not water-tight, but are simply walled with stones without mortar.

"We have two modes by which the waste waters from bath-rooms, wash-bowls, and kitchens are disposed of, to wit: First. It is by many families thrown out of the back door upon the ground, where it is left to smell. Second. By other families it is conveyed through conductors extending from the kitchen-sink, bath-tub, and wash-bowls to dry wells outside of the house. These dry wells, or cess-pools, a few feet deep, are not water-tight, but only stoned up like the privy-vaults. There is, under each wash-bowl, sink, and bath-tub, a trap of lead; and just outside of the house there is another trap in the earthenware tile, into which the waste water from the house enters, and through which it flows to the cess-pool.

"Care is taken that as little solid material as possible enters

the waste pipes; and no excretal matters from the privy-vaults enter them.

"I would be greatly obliged for your opinion in regard to the safety of this system of house drainage as to sewer gas, and the purity of our well-water. And how far should the cess-pool be from the well of drinking water? And what as to the safety of the privy system in regard to our water supply?

"Respectfully, "A. MIDDLEDITCH."

The answer:

"GERMANTOWN, PHILADELPHIA,

"DR. A. MIDDLEDITCH:—*Dear Doctor:*—I regret to infer from your letter that a very unwholesome state of things exists in Iowa. If you have not yet suffered much from typhoid fever and diphtheria, and with large mortality from scarlet fever, measles, etc., etc., it must be mainly a question of time how soon such results come—as the state of things, unless remedied, must necessarily get worse year by year. For towns of any size to have no sewers, and all their drinking water to come from wells within their limits, is very bad indeed. The actual magnitude of the evil must depend somewhat on the size of building lots, nature of the subsoil, etc. But the privies are sure to *saturate the ground* by degrees, until at last it is all tainted, and every well must be poisoned more or less. Within three-fourths of a mile of my present residence a score or more cases of typhoid fever are clearly traced to two wells contaminated by privies; and this notwithstanding the aid of a new sewer to drain the ground of the vicinity.

"What to do about it now is your question. Individually, I should not be willing to try to raise or keep a family in such a place. If obliged to stay there I should arrange a good cistern to receive rain water, with a filter, and use it entirely for drinking and cooking water. If influential with the local authorities and general public, I should clamor for a system of sewers (see how grandly Memphis is coming out now), and, if possible, an aqueduct or system of pipes to bring *good, pure water from a distance* outside of the town. Should the wells be necessarily depended upon, and the town is so young that evidence of contami-

nation of drinking water does not yet appear, it may help matters to do as at Ocean Grove, New Jersey—make *every privy, well and house waste cess-pool to be sealed water-tight* with good cement, and cleaned out under municipal authority once in three months all round. But either the drinking wells or the privy wells ought to be abandoned. House-water waste might perhaps be borne with, if its receptacles were always from forty to sixty feet from the drinking well. The minimum of the books, thirty feet, is not enough to be safe; thirty yards would be better, and *no* distance will be secure long in a town with privies and drinking-wells *neither* of *them* water-tight. Against sewer or privy *gas* your *traps* will defend you, especially if the privy-wells are ventilated. It is contaminated water that endangers your towns.

"Respectfully, "H. HARTSHORNE."

Drs. Hartshorne and Richardson are both sanitarians of high authority all over America, and their words have *weight everywhere*.

"It is contaminated water that endangers your town." "Either the drinking-wells or the privy-wells ought to be abandoned." "Against sewer or privy gas your traps" (where there is a system of drains in the house) "will defend you."

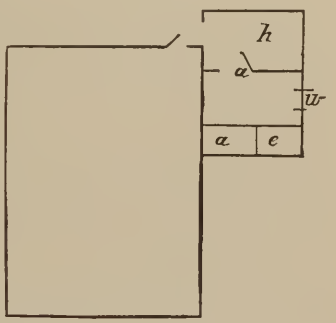
Now taking these propositions, let us discuss them, though the subjects are rather unsavory.

THE DRY EARTH SYSTEM.

In places where a system of water-works and sewerage cannot be had, wells cannot well be abandoned; but privy-vaults *can* be abandoned, and what is called the dry earth system used in their stead. Let us then explain what the dry earth system is, and the modes of using it. In a general way the dry earth system is the safe disposal of excretal or privy matters by mixing them with dry earth, hard coal-ashes, lime, or powdered charcoal—to *throw over the deposit each time a small shovel full, or about a pint of one of these*. This will both deodorize and disinfect. To make assurance doubly sure, as to disinfection, a little chloride of lime may be mixed with the dry earth, or with the sifted ashes.

The privy in which this system is used should, no more than a water-closet, have communication with the interior of the house; for the atmosphere in either cannot be as pure as that of the house should be. It can, however, be safely placed immediately outside of the house, in the direction as to be favorable for the winds to waft the air of it from the house during the great proportion of the year; or in cool climates on the northerly side of the house; and a covered passage-way may lead to it.

The following figure will explain its appropriate location, and the manner in which the system (if a thing so simple can be called a system) is managed.



DRY EARTH CLOSET ON NORTH SIDE OF HOUSE.

The *a* (in the figure) is the seat, under which is a pail, holding about a bushel, and made of galvanized iron; *e* is an earth box, three feet long and twenty inches in diameter, standing on end, and on a level with the seat *a*. The top of the box has a movable cover, which can be removed when the ashes or dry earth is put in; and the bottom has a little opening large enough for the blade of a stove shovel; *u* is a window reaching to near the ceiling for light and ventilation; *d* door into the privy; *h* covered passage way. Under seat *a*, a ventilating tube made of tin 2x2 inches, commences and is extended up the outside of the house as high as the top of the chimneys.

Now every time after the seat *a* is used, all there is about it is to throw over the deposit into the pail under the seat the small shovelful of ashes, dry earth, or lime, or powdered charcoal (whichever is used) from the box; and as often as the pail is filled, the contents are to be emptied on the garden and immediately mixed with the soil; where it will not only be innocent so far as health is concerned, but will be of great value as a fertilizer.

For those who can afford it one of the many excellent earth

closet fixtures may be had. Such an apparatus is nicer and somewhat more convenient than the arrangement above described; for, by a mechanical contrivance, it throws down into the pail the requisite quantity of ashes or dry dirt, every time after it is used.

Earth for the dry earth system may be dried on boards under a shed or in any dry place, and then stored away in a dry place. Common farm or garden soil is appropriate for this purpose; but it should not contain too much sand.

If ashes are used instead of earth, they need only sifting and then kept in a dry place. Hard coal-ashes are best.

If the contents of the pail should freeze in the winter, some boiling water poured on the outside of the pail, when it needs emptying, will loosen the contents very readily.

Small earth closet apparatus are made, and recommended by the proprietors to be ordinarily used in sleeping-rooms. I would recommend that they be *not* used thus. But in cases of sickness they are very much to be preferred to the old-fashioned chair, for they are not particularly unpleasant.

The house pail made with a rim forming a water-seal is also superior to the old-fashioned chair; and is peculiarly suitable for an ordinary bed-room closet.

The great advantages of the earth closet system over the privy-vault system are that the wells and the air are left unpolluted or renders this *possible*. Hence this system conquers the danger to our wells; *removes* the *chief cause of water contamination* in places in which wells furnish the water supply.

Its disadvantages in *large* cities, as compared to water-closets as worked by a regular system of sewerage and water-works, are the vast amount of dry earth to be conveyed to the city, unless ashes are used; and the vast amount of material to be removed from the city.

Its advantages over water-closets in smaller places where there exist systems of sewerage and water-works are that the streams of water and the atmosphere around the streams into which sewerage empties are not contaminated; it is a great saving of water; it is attended by very little expense; and it

makes house drainage less expensive, and far less dangerous to health.

So decidedly prominent are the advantages of the earth closet system over the privy-vault system, that Drs. Hartshorne, William Eassie, and many other excellent authorities, utterly condemn the latter, and earnestly recommend the former. William Eassie says: "The earth and ash-closet systems are necessarily great improvements upon the cess-pool and midden practices, and should in all cases replace them until a thorough water drainage is effected."

The earth closet system has already been successfully introduced in many villages and small cities in America, and into several large cities as well as small in Europe; and *it ought to be used in every place, large or small, where a thorough water system does not exist.*

Is it possible for the people and the municipal authorities to understand this, and to act upon it? Or must infectious diseases, in the future as in the past, sweep, as with a besom of destruction, our children from our homes, and from life? We ought to have a profound sense of interest and of duty here; but if we, as humane men and women, and parents, have neither of these, and yet have a conscience, may it be granted that the conscience shall continually be compelled to listen to the voice of righteous judgment, crying from the little graves, "You have *caused us to die*," until the cry shall arouse us to duty, and to effective action. When scarlet fever, typhoid fever, diphtheria, etc., occur, somebody is to blame for it. Not one of these diseases originates without adequate and preventable cause; and the chief of those originating causes are impure water, polluted air,—*filth.* Is it not then the most imperative duty of town authorities, and of everybody, to see to the safe disposal of excretal matter, slop-water, kitchen refuse, and *everything* which, when decomposing, can create those dreadful diseases?

WASTE WATER, KITCHEN REFUSE, ETC.

Having given a safe and not inconvenient system by which privy matters may be disposed of, we will turn our attention to

the disposal of slop-water, kitchen refuse, etc., in places not supplied with a system of water works and sewerage.

1. How to dispose of these where families are too poor to have house drainage. It may be stated at the commencement, that no family should throw slops or kitchen refuse out of the door, or around the well; for the effluvia arising from the necessary decomposition is exceedingly dangerous to health, repulsive in appearance, and to the sense of smell.

I know of no better plan of disposing of the waste products —the *excretions*, if you please—of the kitchen, bath-room, etc., than the following: burn all combustible parts that are worthless, as sweepings, etc., etc.; feed the useful, as potato and apple-parings, to the hogs, or burn them; throw the slop-water into one place, or into an excavation made in the ground for the purpose, no less than sixty feet from the well, and from time to time scatter upon it dry earth, ashes, or lime, which will prevent noxious emanations. No unpleasant smells should be allowed either in or about the house. 2. It is desirable that every house should, if the owner can afford it, have its drains and supply water-pipes to wash-bowls, bath-tubs, kitchen sink, etc. If both cannot be afforded, let it be the waste-pipes; not for the purpose of conveying away solid materials, for solid materials should be burned as above indicated, drains or no drains, but for the purpose of safely removing all the waste water of the house. We will now inquire how house-drains may be constructed so as to insure the inmates of the house against the sewer-gas which results from the decomposition of the solid material necessarily contained in house waste water.

For the construction of house drainage, we must have—1st, lead-pipes; 2d, earthenware tile; 3d, ventilating pipes; 4th, traps; 5th, a receptacle.

The lead-pipes connect with and receive the waste water from the sink, bath-tub, wash-bowls, and convey it (the waste water) to the earthenware tiles, and the latter in their turn convey it to the cess-pool, or dry well. The following figure represents the general structure of these pipes when connected.

B is the bath-tub in second story of house. *H* is lead-

pipe connected with bottom of bath-tub at one end, and at the other with the earthenware tile *t*. *C* is the cess-pool which receives the waste water. Many construct their house-drains on this principle; and the reader utterly unused to house-drainage will, on reflection, at once see that the plan is an exceedingly dangerous one, since there is no hindrance whatever to the escape of sewer-gas, laden with pestilence, into the bath-room as fast as it is generated by the decomposition of the contents of the cess-pool. So it would be with the sleeping-rooms and kitchen when the pipes are connected with the wash-bowls and sink. Something must interpose between the *gas* contained in the pipes and cess-pool, and the *air* of the house, to prevent the danger; and this is accomplished chiefly by means of traps. Trapping is interposing water between the interior of the house and the sewer air contained in the pipes and the dry well.

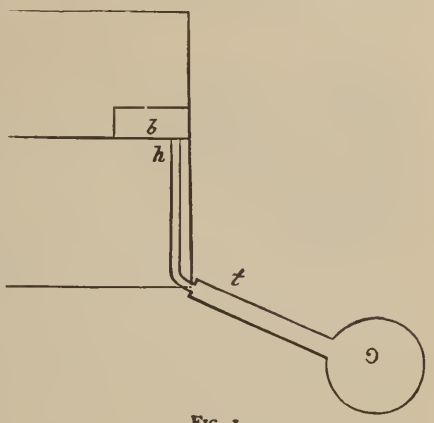


FIG. 1.

The traps are to be situated thus: one lead trap in the lead pipe under each wash-bowl, bath-tub, and sink; which is made in the shape of the following figure.

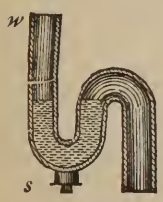


FIG. 2.

W is the wash-bowl, the water of which passing through the pipe fills the lower bend of trap, where it remains until the wash-bowl is again emptied, when it is replaced by new water. Hence it will be seen that gas cannot pass back through the trap without passing through the water, which it cannot do under moderate pressure. *S* is a brass screw in bottom of trap, which can be removed for the purpose of cleaning the trap.

Then there is to be another earthenware trap situated in the

earthenware tile just outside of the house, which is made in the form as represented in Fig. 3.

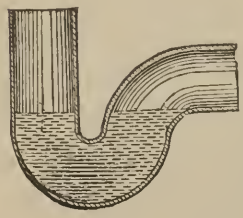


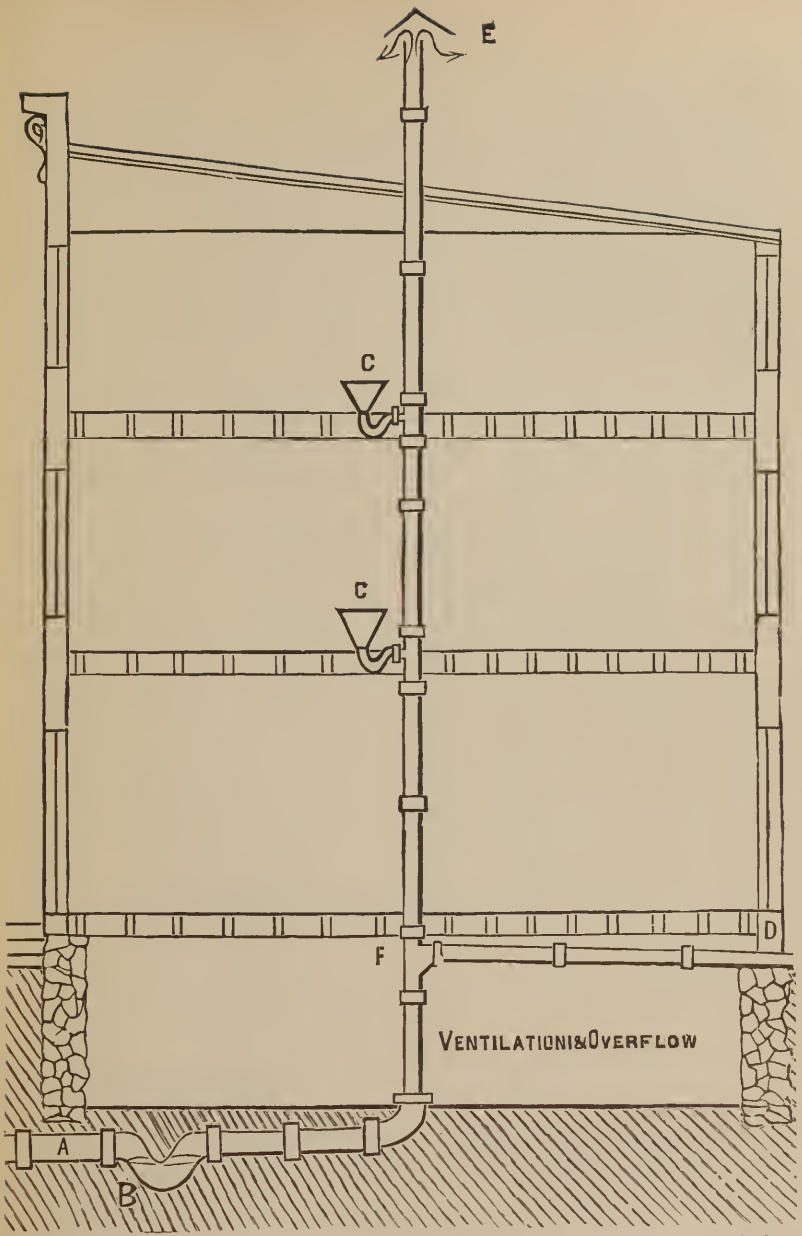
Fig. 3.

Now, since the water fills two traps between the sewer-gas in the cess-pool and the apartments of the house, it would seem that if the plumbing were well done, there could be no possible way for the escape of polluted air into the interior of the house; and usually this is so, in simple house-drainage. Yet, under certain conditions, the water may get sucked or "siphoned" out of the traps; or under a certain density of gas in the cess-pool, the pressure may possibly be so great as to force the gas through the water of the traps. Absolute safety, therefore, demands another precaution to be made—ventilation of the drain-pipes. For this purpose two ventilating pipes should be placed in the earthenware tile, outside of the house, one between the house and trap, and the other between the trap and cess-pool, and one at each trap under washbowls, etc. These ventilating pipes should extend from the interior of the tile, upward along the outside of the house, and end at a small distance above the top of the chimneys. They should be no less than three inches in diameter; above the surface of the ground they should be made of tarred cast iron; not tin. The portion beneath the ground can be made of galvanized iron or of earthenware tile, all to be put together absolutely air-tight.

Some advise the ventilation pipes to be run into the chimney flue; but the advice is unsafe, since the draught, when there is no fire, is sometimes downward instead of upward.

Instead of ventilating tubes outside the house, some conduct the drain pipe up through the roof, opening to the air six or eight feet above. The good results of this ventilation of the drains are greatly increased by having a cold-air opening near the ground to promote a draft—as in a chimney with a fire-place. This is fully shown in the illustration on page 129.

A word here in relation to the cess-pool, or dry well: the waste-water receptacle may be made in one of the following two



A, Drain to Sewer. B, Trap in Main Drain. C, C, Water Closets. D, Cold Air Inlet. E, Outlet for Foul Air. F, the Tee Branch.

Fresh Air entering the Soil pipe slightly above the pavement, at D, being colder than the air already in the pipe, will cause the air therein to rise and pass out through the opening E, at the top. Thus a circulation is produced.

ways: 1st mode: the excavation in the ground, about eight feet deep, and sixty feet or more from the well of drinking water, is to be walled up without mortar, except the arch at the surface of the ground, and *that* to be cemented air-tight. Made in this manner, the waste water from the house which enters it will be absorbed away into the surrounding ground; while the tight arch will prevent the escape of gas. 2d mode: the excavation is to be cemented water-tight all the way round.

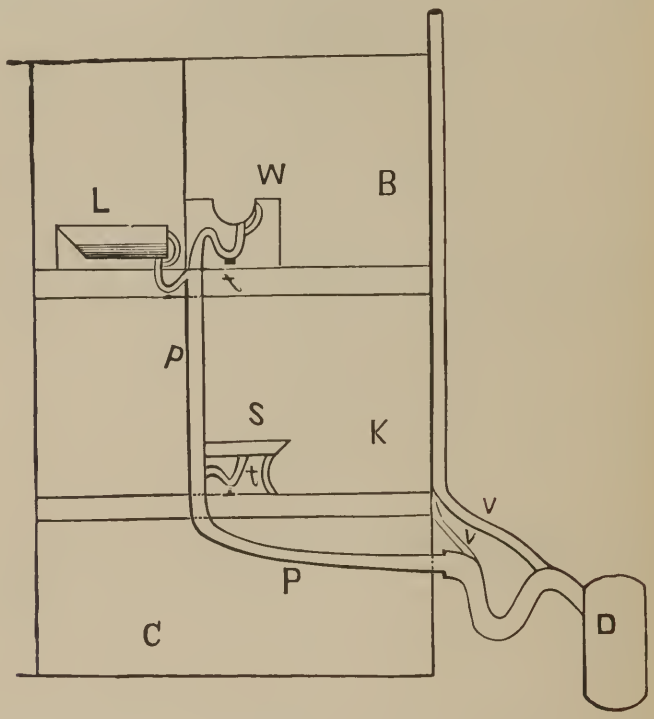


Fig. 4.

and ventilated, the pipe running up as high as the top of the house. When made in this manner, the contents of the cess-pool will need to be pumped out frequently, and carried from the premises, or immediately thrown over the garden soil, and the spot disinfected with chloride of lime, or some other disinfectant. The slop-water receptacles should, if convenient, be placed on the northerly side of the house.

Figure 4, page 130, will perhaps illustrate this system of house drains a little more clearly.

The figure represents a section of the house fronting south. The cess-pool or dry well *D* is on the northerly side of house. *L* in the cut is the bath-tub; *W*, wash-bowl; *S*, the kitchen sink; *t t* are lead traps under each; *P P* are the lead pipes; *V V* are ventilating pipes, which enter the earthenware tile on each side of its trap, and then run along up the side of the house and end a little above the top of the chimneys.

The ventilating pipe, which enters the tile pipe between the trap and the waste-water receptacle, or dry well, liberates the gas from the tile and dry well. The ventilating pipe between trap and house gives an easy escape of the gas which may happen to find its way through the trap. It may thus be easily seen that, with the aid of the auxiliaries, the ventilating tubes, the traps will make the inmates of the house secure against sewer gas, that malign foe of humanity.

To be properly constructed the traps must have sufficient depth to contain water two or more inches deep above the upper line of the lower bend. Hence in placing them they must be well adjusted, and not distorted. Thus, Fig. 2, lead trap, and Fig. 3, tile trap, are correct; and all the traps in Fig. 4 are placed in proper position; Fig. 5 is a lead trap so distorted as to render it useless; and Fig. 6 is a tile trap placed in such a position as also to render it useless.



FIG. 5.

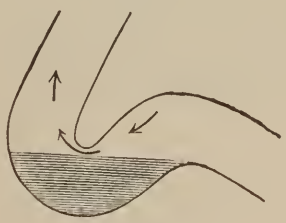


FIG. 6.

Lead traps should be made sufficiently heavy to ensure them against quick corrosion in a degree as to make them permeable to gas. The screw at the bottom of the lower bend should from time to time be removed, and the trap washed out.

The traps should not be allowed to become empty when not in use. The water in the traps should be often renewed, for it has been found by experiment, that water will absorb sewer gas if it is allowed to remain long at rest in the trap, and the gas will thus find its way into the house. The traps and pipes should be frequently flushed with water for the purpose of keeping them clean, and some disinfectant turned in from time to time to keep them sweet. The rule should be here as everywhere in and about the house, *not to allow any unpleasant odor.*

Every sink and bath-tub should be supplied with a self-closing valve. The kitchen sink especially should be protected with a trap, otherwise the bad air will rise through the waste-pipe and taint the air, food and water in the kitchen, or elsewhere in the house. Fig. 7 shows how this occurs. Fig. 8 shows how bad

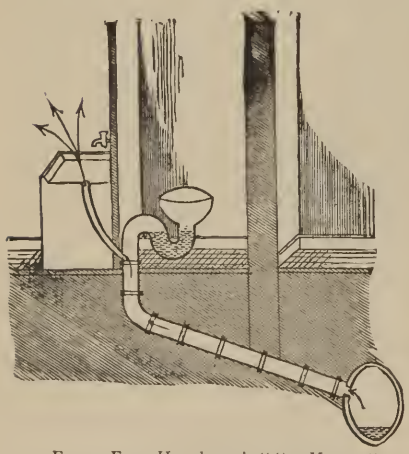


FIG. 7. From Hartshorne's "Our Homes."

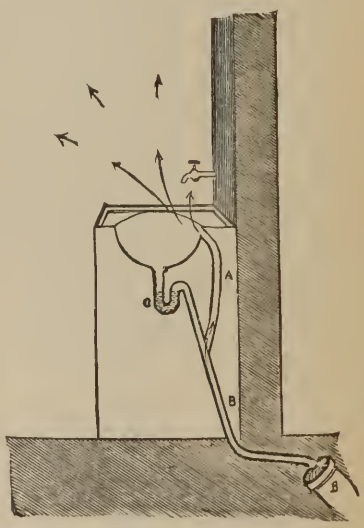


FIG. 8. From Hartshorne's "Our Homes."

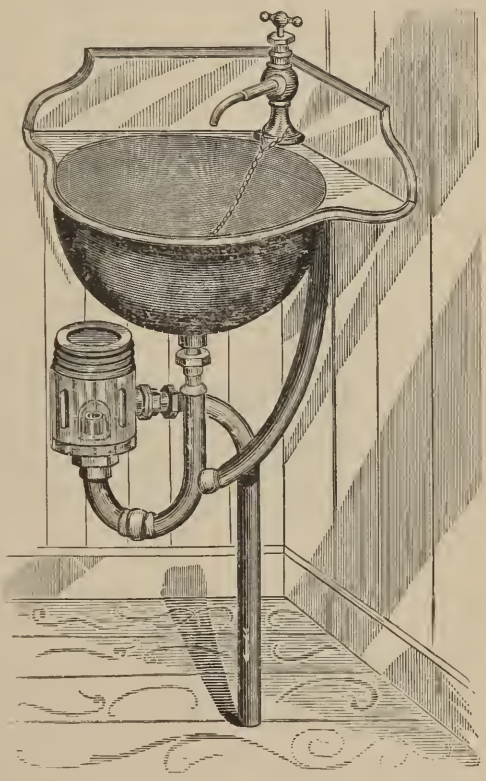
air enters sleeping-rooms, where the overflow of the wash-bowl connects with the waste pipe *below* instead of above the trap.

With those who are careful in turning off the spigots, the overflow of the wash-bowls should be closed with plaster of Paris. Indeed, for such the wash-bowls might be made without

an overflow, and it is better if a little water is constantly kept in them.

The illustration on this page represents Sprats' mercury seal, which may be attached to wash-stands, bath-tubs and sinks.

The water, when discharged from the basin, takes the course indicated by the arrow. As the water enters the reservoir, the glass valve (or inverted cup) is raised nearly to the top, thus allowing to the water free egress. As the water recedes, the valve falls back into mercury surrounding the inlet-pipe, thus making a perfectly air-tight joint which cannot be broken by evaporation or siphonage.



All the waste water pipes, and the ventilating pipes, by all means, should be water and gas tight, and the whole apparatus be made in the most perfect manner.

If it can be avoided, no drains should traverse the basement of the house. If they *must*, the tile should be laid on a bed of concrete, the joints perfectly joined and cemented together, and then cemented with water lime all over, and lastly covered with concrete a foot in depth; and should have at least two inches fall in ten feet.

It is well to have the kitchen drainage entirely disconnected from that of bath-tub and wash-bowls.

This system of disposing of the waste water of the house, if

properly attended to, will protect the inmates from sewer gas; the dry earth privy system will remove the chief danger that threatens wells. The wells must be also protected from these foes: the dry wells into which the slop-water flows, and stables, and hog-pens. If these are placed sixty feet or more from the

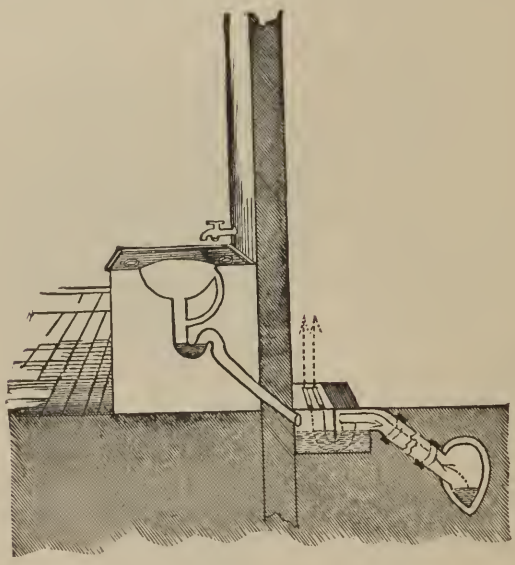


Fig. 9. From Teale's "Dangers to Health."

well, these foes are vanquished; providing, of course, the well itself is cleaned out yearly. The nearness of neighbors' dry wells, stables, etc., must be provided against.

While the system of dry earth closets, and that of the disposal of slop-water, which have now been described, are undoubtedly safe in towns where there is no regular sewage system and water-works, the waste water apparatus will need some further safeguards against sewer-gas when the sewers contain the contents of water-closets. In the latter case, each trap needs ventilating; the house waste pipes should be disconnected from the drain outside of the building; and be made to discharge their contents on an open trapped grating, as in Fig. 9; and the outer extremity of the house pipes themselves should be trapped.

The water-closet should have its own appropriate apparatus, entirely disconnected with all the waste or supply-pipes of the house, etc., etc., which I will not further describe, since, for general sewerage and water supply of large cities, I refer the reader to works on those subjects.

THE FLUSH TANK SYSTEM.

There is another plan by which slop-water and excreta may be disposed of in the smaller towns; of which I have read, but have never seen. The method is feasible, and conforms in theory, at any rate, to the plan of Nature. Since some theories are not *satisfactorily* practical, and since I cannot speak of this system from my own personal, visual knowledge, I beg leave to ask another to speak for me. An article in a late number of the New York *Independent* describes the plan so briefly and to the point, I will transcribe the essential part of it as follows:

"We shall here speak of one plan, now frequently adopted in England and already to some extent in our own country. It may be called 'The Subsoil System of Irrigation,' or the 'Flush Tank System.' The method may be simply described as follows:

"Sewer-pipes properly laid and trapped and of proper material carry all the slops of the household and the excreta to a distant town tank. Practically this is found to reach its destination in quite a dilute, liquid state. If some of it is not sufficiently liquid, an accessible catch-basin is so arranged that half an hour spent each day at the point of terminus easily keeps it in working order. A siphon is so arranged that, when this tank gets nearly full, it empties itself, and thus its contents are never retained over a single day. From this tank, or from the large pipe into which it thus empties itself, go forth great numbers of drains, laid loosely about ten or twelve inches under the ground which is to be thus watered and enriched. When this flush-tank empties itself, the liquid is thus thrown out in every direction by a quick force and distributed as it is needed. It is found in practice, that, by this system of sudden flushing, little or no deposit is left, and the field being cultivated, there is rank growth and a disposal of the

decomposing material without odor. Sometimes the tank is so arranged that in the winter the slop can be distributed on the surface, instead of through the pipes. Some prefer to use the dry earth and dry removal-house or yard system for dry human excreta, using this system only for all waste water, etc. But it can easily be used for the combined systems. It utilizes the waste materials, without much over-expense, at the same time that it effectually removes them from houses. While, as in all artistic methods, there needs to be expert arrangement of all details, adaptation of size to quantity, and the most faithful sanitary superintendence and administration of the system in its continued use, we are sure that it accomplishes what it claims. We have no doubt that any householder owning a lot 25x100, not more than 25x40 being covered with buildings, and depending upon a public or cistern water-supply could thus effectually and safely dispose of all house "off-falling," if the system was accurately worked. But as some might be careless, it is better to combine it in a system for a town. We have recently visited Lenox, Mass., where there is a fair specimen of the system. Only about fifty or sixty houses are connected with it, and some of the minor details of the plan might be improved. It would have been better if the four or five acres of ground had been underdrained. In some parts there is defect in arrangement; but, nevertheless, the system can be fully vindicated. The drains do not easily clog, and proper grease, traps, and catchment basins at the tank make the whole plan feasible. With this and other plans of outhouse and sewage disposal, at reasonable rates, there is no possible excuse for the ground and air-pollution system on which most of our smaller cities and towns and our country homes are worked. This disposes of the permanent cess-pool and the retained excreta and returns it to mother earth for natural disposal. There is always room for discussion as to which system is best in each particular town; but one thing we know, that there are now feasible systems for each house, town, and city, that leave no excuse for methods of filth-storage and soil-pollution now in practical use, not only in slums, but among very nicely-dressed people. Until the advisability of preventing

disease and the connection of these evils with disease become fully appreciated, we must expect to pay the penalty for breach of natural law, in diminished vitality, in impaired vigor, in race enfeeblement, and, now and then, in some gushing outbreak of pestilence."

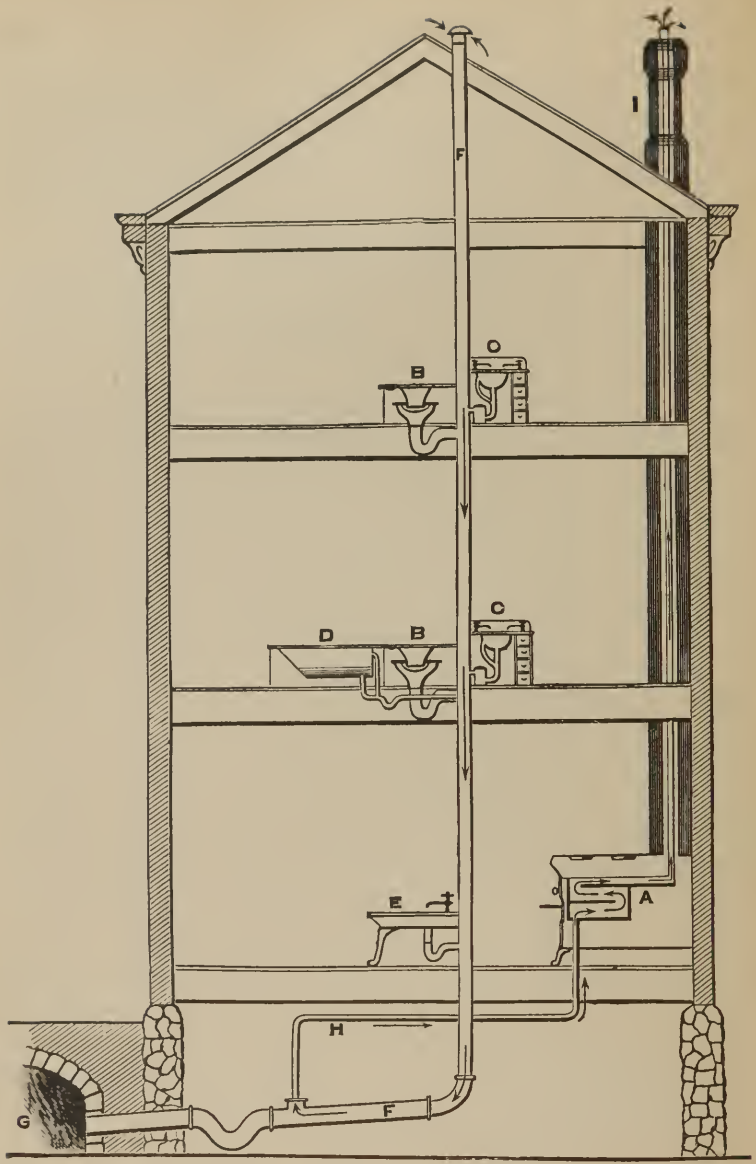
A SEWER-GAS CREMATOR,

for destroying the hurtful properties of sewer-gas, has been approved by boards of health in several cities. It was patented in 1879, by A. W. Rand, and is described as follows (*see illustration, page* 138):

"The cremator consists of an air-tight packed retort, usually forming a part of the fire-box of the house range, with pipe connections to the drain-pipes and to the open air, for the purpose of ventilating said drain-pipes and deodorizing the foul gases therefrom. In cases where large vaults are to be ventilated, cremators of a special character are made. With the cremator two pipes are connected, one of which joins the main drain at its lowest point, and the other enters and extends upward through the chimney. The soil pipe is extended to the roof. The action of this is obvious: the suction of the cremator is supplied from the vent at the top of the soil-pipe, thus creating a constant circulation of pure air throughout the entire length of the drain. In passing through the heated retort, the germs of disease contained in the current are completely destroyed by the action of the heat—which is seldom less than 400° Fahrenheit—before being passed through the outlet pipe to the outer air."

DISINFECTANTS AND HOW TO USE THEM.

A medical student, when asked to define a disinfectant, replied: "It is a something, the smell of which is so disagreeable that all the windows have to be opened to let in the fresh air." In the light of that answer alone, disinfectants are not without their value, since many will not give their houses ventilation until the atmosphere within becomes villanously pestilential. But some of the disinfectants possess an intrinsic value of their own, which no family can afford to do without. They should not and cannot take the place of pure water, personal and household cleanliness, pure air, and sunshine—they should supple-



"SEWER GAS CREMATOR."

A, Cremator located in the stove or range. B, Water Closet. C, Wash Basin. D, Bath Tub. E, Kitchen Sink. F, Soil Pipe. G, Sewer. H, Sewer Gas Pipe through Cremator. I, Chimney.

ment these. They are, as it will appear, available in places and under conditions that no other means can adequately reach.

Dr. Angus Smith says, that disease may generally be caused, 1st, by diffusive gases, such as carbonic acid, marsh gas, and others; 2d, by vaporous and volatile substances falling in cold air, and taken up in fogs, which are not to be classed with gases; 3d, by putrid or decomposing matters which include organic forms, and which, when transferred to human beings, are capable of causing contagious diseases; 4th, by those more organized bodies that have definite existence, and which multiply affections when they find suitable soil for propagation.

It is the 3d class with which disinfectants have chiefly to do. It is their function either to *prevent* the decomposition of substances, or to render the *products* of putrefaction innocuous, in places or under conditions which other means cannot sufficiently reach. For example, appropriate ventilation and scrupulous cleanliness will do very much but not all toward dissipating the poisonous particles which float in chambers in which infectious diseases exist. Disinfection will, to a great extent, fix and destroy those particles as they originate; cleanliness will retard the work of generation, and ventilation will sweep them from the apartment.

The best disinfectants are therefore somewhat contagion destroyers. Thus a solution of carbolic acid or chloralum placed in the bed-pan before it is used by a patient suffering from contagious disease, destroys the contagious properties. The same when mixed with the excreta of the healthy prevent decomposition. These or other matters when decomposing evolve a noxious gas which works havoc with human beings, in the shape of typhoid fever, diphtheria, scarlet fever, and allied diseases. The utmost care ought to be used as to the removal and disinfection of all excretal matters which are so much inclined to adhere on and around one who is ill of any contagious disease; for the pollution of the air caused by decomposition of such matters is bad for the sick, and secures fresh victims to the disease.

We may infer from what has been said that the chief aims of disinfection are: 1st, to prevent, when possible, the decomposi-

tion of simple materials; 2d, to render harmless decomposition of substances when it has already taken place; and 3d, to destroy infectious germs in the sick-room.

Disinfection of the sick-room and its contents has received some attention elsewhere, and will therefore require less notice here. *What* in every-day life to use for disinfection, and *how*, must be noticed further.

No unpleasant odors should be permitted in or about the house. Such odors should even be *anticipated*. Therefore all house-drains or pipes, cellars, water-closet and sleeping-room fixtures and every spot where decomposition or an odor can arise should receive a dose of good disinfectant at regular and short intervals. There are many very reliable substances that may be used for the purpose, a few of which let us review.

Sulphate of iron is very valuable for certain purposes; but the iron causes stains, which render it inappropriate for many purposes. It is very appropriate for the disinfection of house-drains, and receptacles of waste-water, water-closets, etc. Ten quarts of the strong solution (ten pounds to six gallons of water) will thoroughly disinfect a foul privy-vault; or half a pint will answer well to put into a bed-pan or night-chair each time before it is used.

Permanganate of potassium, one ounce dissolved in a gallon of water, is an *excellent* disinfectant, where its stain is not objectionable.

Iodine has been highly extolled by some, and it is certain that a little of it placed in a saucer, with a little muslin to confine it, will do much towards rendering foul air of a room more endurable.

Salt, *vinegar*, *tar-water*, and *burning coffee* are all disinfectants of lesser importance; but cologne and burning paper are not disinfectants, and should not be used as such.

Saturated solution of carbolic acid, one part to three or four parts of water, is excellent for the purpose of arresting putrefaction; and is therefore appropriate for waste-water pipes, cesspools, etc. Its odor is not pleasant.

Chloralum. For household purposes, it is desirable to have

an effectual and non-poisonous disinfectant, such as chloralum. A solution of chloralum containing 1,500 grains to the pint, will, when diluted a little, perfectly disinfect the secretions in the vessels of a sick-room; put into a saucer undiluted it will purify very well the air of a room contaminated by any cause; it is well fitted to purify drains, cess-pools, water-closets, etc.; its powder may, with the best effects, be sprinkled in cellars, stables, poultry-houses, or anywhere else where odor exists; it may be used to advantage for disinfecting clothing; and for most purposes for which other disinfectants are valuable, this is no less so. It is composed of the hydrated chloride of aluminum, and is sold in both the fluid and solid state.

Ozone, a peculiar form of oxygen, is contained in varying quantities in the atmosphere. In a concentrated form, as prepared by chemists, it seems to be a most efficient agent for the destruction of the germs of contagion of every kind. Taking advantage of its powerful disinfecting properties, chemists have produced it in a concentrated form for this purpose; and the aromatics which they combine with it render its odor pleasant. But there seems to have arisen a question as to its safety. Dr. Day, in a paper read by him at a recent Convention of the Sanitary Institute of Great Britain, instanced the death of animals resulting from breathing ozonized air. The symptoms produced were those of bronchitis. He inferred that such an air is capable of producing in man diseases of the respiratory organs.

Dr. Moffatt has observed that during periods when the atmosphere contained an unusual quantity of ozone, apoplexy, epilepsy, vertigo, neuralgia and diarrhœa are more than ordinarily prevalent. We may, therefore, conclude that until ozone is subjected to proofs as to its safety, it will be prudent to use all ozonized preparations with much caution as disinfectants.

Charcoal, *lime*, *ashes* and *dry earth* disinfect by absorbing the gases emitted from decomposing substances. Dry earth is, indeed, Nature's great absorber of putrescence; all of these are excellent, but their uses are limited on account of the deposit. Thus they cannot be used in house-drains because they will fill up the traps.

White-washing sweetens premises, and is excellent for cellars.

Chloride of lime is a good disinfectant, but its usefulness is also limited on account of its unpleasant and pungent odor.

Heat is the most efficient disinfectant of all. A temperature of not more than 240° Fahr. is capable of utterly destroying disease germs. Hot chambers for disinfecting clothing, bedding, etc., are provided in some large cities, and should be in all cities, large or small.

Fumes of burning sulphur are valuable as a disinfectant, and the value consists chiefly in the purification of sick-rooms after having been occupied by patients ill of infectious diseases. In such cases it should always be used. The following is the manner: For every 1,000 cubic feet of space, a pound or a pound and a half of lump sulphur is needed; place it in an iron kettle, and this kettle place over another containing water, to guard against danger from fire. Then the sulphur is to be set on fire, the doors and windows being previously closed, and left closed for a day or more. All the inmates must immediately leave the apartment, for no one can remain and live.

Having recounted some of the dangers of decomposing slop-water, kitchen refuse, privy matters, etc., and the safeguards against those dangers, it is trusted that we are mutually convinced of the imperative necessity of using every precaution in our power concerning these things. We should also have come to the wise conclusion, with all our convictions, that our own dirt and filth are no more innocent than those of our neighbors.

WATER SUPPLY.

Impure Water and its Dangers and Tests.—Carbonate of lime and sulphate of lime give to water the quality called hardness. These lime-salts, in the process of boiling, are partly deposited, and coat over the inside of tea-kettles and steam-boilers with crusts, which annoy housekeepers, and seriously obstruct the movement of steam-engines. A moderate amount of lime

ingredients in water does not, as a rule, render it unwholesome for drinking. As has already been shown, it is the *soluble* impurities of an animal or a vegetable origin which we have to fear, and which produce such sad havoc with human life.

SOURCES OF WATER SUPPLY.

A river, lake, or an artesian well is usually the source from which a town furnishes a water supply, through a regular system of water-works. When each man provides water for his own family, its source is usually a well, cistern, or a spring.

Water is supplied by the public, either on what is called the constant, or the intermittent system. That is to say, the public mains, in the constant system, are always kept full, and families receive water directly from the pipes. In the intermittent system, the mains are charged during a certain number of hours each day, and house cisterns are required for storing it. The latter system is objectionable because water in those cisterns becomes more or less stagnant, and liable to contamination through some connection with house drains, or with impure air: for it should be remembered that water is an absorber of atmospheric impurities which surround it. Fortunately the constant system is almost universally used in America.

1. River Water.—Many cities receive their water supply from rivers, the safety of which is founded on the current opinion that running water is necessarily pure. The movement of water in a river exposes and mingles it with the sunshine and the air, which tend to eliminate organic matter with a rapidity somewhat proportionate to the rapidity of the current; stagnation encourages an accumulation of organic matter. This does not prove that running water is always pure. That depends very much upon what amount of filth is entering the river in the shape of sewage, slaughter house refuse, etc., etc. The oxidation of many streams is certainly inadequate to purify the water to the extent which makes it fit to drink. In procuring a water supply for a town, it is unsafe to act upon any assumption. From whatever source it comes, water ought to be made to prove itself pure by the experimental tests of chemistry.

River water is best, when taken from the middle of the deepest and the most rapidly flowing river.

2. Lake Water.—The waters of large lakes are less liable to contamination from without than rivers; and since they are in constant commotion, often swept by terrific winds, and their particles kissed by the atmosphere and the sun, the process of purification goes on about as rapidly as in rivers. Hence, waters of large lakes, far from shore, are generally purer than river water.

3. Spring Water and Well Water.—On the same principle of motion, the pollution eliminating powers of springs are greater than those of wells. Fortunate is the farmer who has on his farm a living spring. In a lesser degree, however, the water in wells move, the current usually being in a direction towards a river or lake.

The chief source of contamination of springs and wells is the environs. For most villages, and many small cities, common wells furnish the water, and since a great majority of such towns are destitute of any system of sewerage, the surface of the ground in those localities is pierced with the wells and privy-vaults in close proximity, as a sieve is pierced with holes. In the midst are stables and hog-pens; hard by are the graves of dead men, and dead beasts; and still further to add to all these abominations, many families place their open cess-pools within a few feet of the well, do their washings on the platform, and throw the kitchen slops around it. Let all the filth surrounding the wells in a small city be uncovered, and what a scene meets our view! Is it strange that all the ground becomes saturated and over-saturated with the bubbling and reeking corruption, and the wells and surrounding air are armed with virulent pestilence?

Since the people cannot be too thoroughly aroused to the danger of water contaminated with vegetable or animal impurities, one or two more cases in point may be given.

When a young man, I attended school in a town in which wells furnished water for the people. The cemetery was placed in the midst. Though the little city was beautifully situated,

and had the general aspect, within and around, that man could live there in the perfection of health, and fulness of years, it really was insalubrious, in that it was often visited by infectious diseases. These do not exist without an adequate cause. What was the probable cause there? The water, though pleasant to the taste, and normal in appearance, was impregnated with decomposing organic matter, the proceeds, probably, of the common filth of towns in which there is no system of sewerage, and of the graves of the dead. The people actually drinking of their buried friends! A peculiar species of unconscious cannibalism! What a commentary on the ingenuity of man for devising safe means of sanitation.

Many times I have seen infectious disease in families whose neighborhoods have not been so visited for years. Generally I have found the cause either in the disposal of house slops and kitchen refuse, or in the drinking water. This day I have analyzed some water taken from a well situated seven miles in the country. The following caused this analysis: Mr. S. came to my office and said that one of his children had taken cold, and his throat was a little sore. There had not been a case of diphtheria in that neighborhood for years, and, therefore, I took it for granted that the affection of the throat was simply the result of a cold, and I sent out a little medicine. The next day I received a message to come see the child, as he was much worse. On my arrival I found the case to be one of diphtheria, of the most malignant type, and about two days from that time the little boy was dead. I found, upon inquiry, that the pump in the well from which they had usually drawn water, had become out of repair, and that recently they had been using water from a well around which a drove of hogs, for some time, had been fed, and within a few feet of which those uncleanly animals had a wallowing place. Upon analysis of a specimen of the water I found it saturated with both animal and vegetable matter.

This family consisted of five children, four of which had the disease and died. The family had heard of a physician who claimed that he never lost a case of diphtheria and he attended

the last three children that were victims. The first case might, perhaps, have been saved if he had been visited by a physician early enough.

I advised strict isolation of the family, and the disease did not spread to others.

I have not room to multiply examples of this kind: it seems to me that it need not take many such instances to convince any reasonable person that there is actual danger, and *great* danger in the use of water contaminated with matter of an animal or vegetable origin.

It is strange how thoughtless and inexcusably careless many are, in both town and country, with reference to their wells. Not only is this so after the wells are made, but also in their construction. How then should a well be constructed? Every well should be large enough to admit a man to clean it out. The wall, from near the bottom upward, should be laid so perfectly in cement as to make the walls water-tight. The ground adjacent to the wall down to very solid ground should be clay-puddled. The platform should be made and kept impervious to water and insects. The well should be ventilated by placing an upright box, a foot in diameter, over an opening of the same diameter in the platform, the box pierced with holes, and covered with a fine wire screen. Every well should be placed at least sixty feet from filth of every kind, cleaned out thoroughly, and the water *tested* at stated periods.

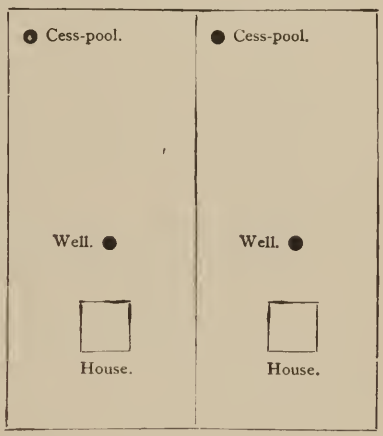
Moderate hardness in water, as before stated, is not objectionable to most persons, for drinking purposes; yet certain well waters are excessively hard. The sulphate of lime in water is very difficult to remove. The carbonate of lime, however, may, in part, be removed by simply boiling the water, or adding quick-lime or sal soda. The boiling expels the carbonic acid which holds the carbonate in solution, and thus the lime is liberated and deposited at the bottom of the vessel, or adheres to its sides, as seen in kitchen tea-kettles. The quick-lime or sal soda unites with the carbonic acid, and sets free the lime contained in the carbonate of lime in the water.

How to locate wells in villages and small cities, where they must be depended upon for the water supply.

In the more thickly populated parts of towns, wells should not exist at all. But where the building lots are no less than sixty feet front, and 140 feet deep, and only one house on each lot, wells may be made comparatively safe. If the common privy system be used, the safety must sooner or later have an end, the time varying somewhat according to the nature of the soil, etc. To ensure even that amount of safety some system must be carried out, or else cess-pools, etc., etc., will contaminate not only the wells on one's own premises, but also those on his neighbor's. The arrangement represented in the following illustration may serve somewhat as a guide.

The cut represents two building lots, each sixty feet wide, and 140 feet deep.

The dry earth system for privies should be used, but if the old-fashioned privy-vaults are inevitable on account of the indifference of the people or municipal authorities, they can be placed on the opposite corners of the lots from the wells, but do not use such a privy; it is unsafe, a nuisance, and a shame to all civilization.



4. ARTESIAN WELLS.—In some localities artesian wells are not certain of success. Their nearly sure freedom from organic impurities, however, renders them the true source of water supply in localities geologically favorable for such wells. An artesian well though, a thousand feet or more in depth, costs a large amount of money, and this deters many towns from investing in this luxury. Yet many such grievously poor towns pay for gas works, and too often a high price for a poor article of gas, not half as desirable as good kerosene oil. They help build railroads to link together cities and States, but they are so poor they cannot expend money for sanitary purposes, essential to save the health and the lives of the people!

5. Ice Water.—In the process of freezing, water, in a great degree, parts with both its mineral and organic impurities. Ice taken from moderately pure streams or bodies of water consequently generally makes wholesome water if not taken too cold.

6. Rain Water.—Since the mineral substances contained in good well, spring, river and lake water, are nearly identical with the mineral constituents of human blood, it would seem self-evident that these are the natural, and therefore the best waters for human beings. This the instinctive taste of man corroborates. For these reasons rain water is not usually to be preferred to other waters. If used for drinking purposes, it should be remembered that, at its *best*, it contains more or less of the washings of the atmosphere, consisting in part of gases generated from organic decay, atmospheric dust, and dust and other matter from the roofs of houses. The latter may be partially avoided by turning the water aside from the cistern for a short time at the commencement of every shower. This it is not always convenient to do.

The cistern itself should be walled with bricks and cemented. The water should touch no lead anywhere. If the surrounding atmosphere is pure, it should be ventilated by a close, strong iron wire cover: the platform made so tight that not an insect can find its way into the water. Every cistern calculated to furnish drinking water should be cleaned out every three months—all of which contributes to safety to a certain extent, but safety is not yet. For no cistern water should be drank unless it is previously and thoroughly filtered. With that idea in view, there should be a brick partition across the cistern, virtually making two cisterns of it; and the water allowed to fall into one part, and filtered through the brick partition into the other; the water, for culinary purposes, should be taken from the last part. Many depend entirely on the cleansing powers of this brick partition, but its powers are inadequate to purify and fit the water for drinking purposes. Another safeguard is called for, to wit: filtration through a good animal charcoal filter. Even then the water better be boiled before it is drank.

WATER-SUPPLY PIPES.

Besides *organic* impurities, there are often found in water metallic poisons, originating from improper water pipes. We should consequently be interested in the inquiry, "What are safe water conductors?" *Iron pipes* made of cast or wrought iron are safe: the objection to them being their readiness to rust. Water acts upon *galvanized* (zinced) iron to some extent, dissolving more or less of the zinc, sufficient in some cases, probably, to render the water unwholesome, and sufficient to excuse such pipes from conveying drinking water.

Wooden pipes are unobjectionable until they begin to decay—when decaying, we have an organic impurity.

Stone earthenware conductors are in every way excellent, except their liability to break.

Lead pipes are very convenient and very dangerous; and especially dangerous for the conveyance of soft water; since soft water dissolves lead, often to a poisonous extent. Lead water pipes should, therefore, be discarded.

Block tin water pipes are excellent; so are tin-lined lead pipes until the tin wears through and exposes the lead.

TESTS FOR ORGANIC IMPURITY IN WATER.

The reader should be so convinced of the great danger to health and life of those who drink water containing much organic matter, that he will insist upon informing himself of the purity or impurity of the water used in his family. Since some dangerously contaminated waters hold the organic matter in such perfect solution as to look, smell and taste innocent, how is one not a chemist to find out concerning freedom of the water his family uses from decomposing organic impurities? For all practical purposes, the following tests are sufficiently precise; while they are so simple that every family may easily use them.

First test.—The purest obtainable water four drachms (equal to about four teaspoonfuls); permanganate of potassa a little more than the water will dissolve. Add two drops of this saturated solution to one ounce (equal to about eight teaspoonfuls) of pure water Then to four ounces (equal to thirty-two tea-

spoonfuls) of the water to be tested add two teaspoonfuls of the last solution. If the water you thus test is sufficiently pure for drinking purposes, the bright pink color imparted to it will remain unchanged for an hour or more. But if before one hour the color is changed, and a sediment or precipitate appears, there is an unsafe amount of organic matter in the water. This test is a very delicate one for organic impurities, except the albuminoid substances, and these it does not touch. Therefore in every case it is better to use this test first and corroborate the evidence it gives by the following, which we will call

Test No. 2. Pure water four teaspoonfuls; permanganate of potassa, 1½ grains; hydrate of potassa, or caustic potash, in the stick, 6 grains—mix and dissolve. To thirty-two teaspoonfuls of water you want to test, add three or four drops of the above solution, and if the water remains of a beautiful pink hue for a day or more, it is a perfectly safe water for drinking purposes; but if the water in a few hours loses its pink color, and gives a brownish precipitate, it contains a dangerous amount of organic matter and should be rejected. The sensitiveness of this test to albuminoid substances may be proved by adding a particle of the white of egg to the water being tested.

The sun test is of some value, but I would not advise a family to rely upon it alone. Fill a new, perfectly clean pint bottle with the water you want to test. Dissolve in this water a lump of the purest white sugar the size of a pea, and then set the bottle on a window sash where it will be well exposed to the sun; if the water is free from vegetable and animal impurities, it will remain clear for a week or more: if, after a time, the water becomes turbid, or if it contains a deposit, or if flakes are found floating in the water, the presence of organic matter is shown.

Another minor test is to keep the bottle of water standing, for a few days, in a very warm place, and if very much organic material exists in the water, it will have an unpleasant odor.

TO PURIFY WATER CONTAINING ORGANIC MATTER.

If a family must from necessity drink water which contains organic material, can anything be done towards purifying it?

Filtration first and boiling afterwards will render impure water comparatively innocent, yet not by any means always innocent. These processes will not, however, destroy mineral poisons—as lead, arsenic, copper, etc.

How to Make a Good Filter.—Sand, gravel and animal charcoal make an excellent filter; and for domestic purposes, such a filter may be made as follows: take two large flower-pots, one larger than the other; fill the hole of the larger pot with a nice piece of well-washed sponge; inside and over the hole of the smaller pot put a piece of clean, white flannel; then on the flannel a layer of pebbles three inches deep; on the pebbles a layer, three inches deep, of thoroughly-washed white sand; next, small pieces of charcoal four inches deep (animal charcoal is much the best, and can be purchased at drug stores); and on the top of the charcoal place another layer of pebbles. Now place the small flower-pot on a three-legged stool, in the centre of which is made a hole; into the holes of the flower-pot and the stool fit a tubular pipe reaching three inches below the hole of the stool, and under this place a vessel, which is to receive the water as fast as it passes through the filter. Put the large flower-pot on the smaller one. Lastly, turn the water to be filtered into the upper pot, and it will trickle through the sponge of the upper pot into the lower one, and through the pebbles and charcoal into the vessel under the stool, from which it is to be used.

Care must be taken to wedge the sponge into the orifice of the upper pot sufficiently tight to prevent the water from running through it faster than the lower pot can filter it.

The sand and pebbles should occasionally be renewed, the sponge and cloth often washed, and the charcoal from time to time well washed in boiling water, and then heated very hot in the oven.

Since water is an absorber of impurities, it should always be filtered in a scrupulously clean, well-ventilated room. Thus filtered, it is not only strained thoroughly, but more or less purified by the charcoal, and by the water's breaking up and exposing its particles to the oxygen of the air. No amount of fil-

tering and boiling of impure water should be relied upon, however, if pure water is procurable. Oh, for a general awakening to the great importance of absolute purity in the universal beverage which gurgles and sparkles everywhere, but alas! too often carrying death amid the sparkling drops.

AIR AND LIGHT.

AIR, AND ITS RELATIONS TO HEALTH AND DISEASE.

Every one fully knows that human life cannot exist without air—knows that if one holds his head under water, so as to exclude the atmosphere from his lungs for only a few moments, death will ensue. As air is necessary to life, so *pure* air is necessary to sound health, not to corporeal health only, but also to mental health. Inactivity and seclusion in the bad atmosphere of unventilated apartments will truly make a man half misanthropic in his best friendships; severe and morose in his theology; austere, cynical, weak or sapless in his philosophy of life. Brave, vigorous, humane, juicy men, like Whitefield, Roger Williams, George Washington, James A. Garfield, who clear the air and make men better, wiser and happier wherever they go, did not grow in airless libraries, nor in dark parlors, but in the pure atmosphere and bright sunshine which God has so bounteously bestowed.

Why is death produced by holding the head under water? Or why do we need to breathe? To understand this it will be necessary to remember that every tissue of the body is incessantly undergoing disintegration, wearing out, burning up, if you will; and that this waste organic matter, which is all the time rendering the blood impure, must as incessantly be removed from the system, which is done by the excretory organs, as the lungs, skin, etc. But the lungs have another function to perform, without which no life can continue, and that function is to inhale air. Air unpolluted is composed of nitrogen and oxygen, in about the proportion by bulk of seventy-nine per cent. of the

former to twenty-one per cent. of the latter. Atmospheric oxygen, it must be understood, is the great life-supporting principle—nature's all-efficient blood-purifier. Nitrogen, in the atmosphere, seems to be mixed with the oxygen for the purpose of diluting, and thus modifying the stimulating properties of the latter.

To understand *how* atmospheric oxygen purifies the blood, the process of respiration and of the circulation of the blood must briefly be considered. It will not be essential to our purpose, however, to describe *minutely* the anatomy of the circulatory organs.

The heart is the great central organ of the circulation, the function of which is to propel the blood through the arterial system, which it does by its inherent power of contraction and expansion.

The heart has four cavities, or apartments: the right auricle and the right ventricle, which always contain impure blood; and the left auricle and the left ventricle, which contain pure blood. Each of these four cavities has an orifice, which permits, during contraction, the blood to flow onward in its proper direction. These cavities are provided with valves, which prevent reflux of the blood.

The arteries are vessels which convey the blood from the heart to all parts of the system.

The veins are vessels that return the blood to the heart.

The capillaries are minute intermediate vessels which receive the blood from the arteries, and return it to the veins.

Now commencing at the right auricle of the heart, the general circulation of the blood is as follows: the right auricle contracts, which presses the blood into the right ventricle; then the right ventricle contracts and forces the blood into and through the pulmonary artery and its branches, to and through all parts of the lungs, where it is taken up by capillaries and given to the pulmonary veins, and the latter convey it to the left auricle of the heart; which auricle contracts in its turn, and presses the blood into the left ventricle; and then the latter contracts and forces the blood into and through the great artery, called the aorta, and its

innumerable branches to all parts of the body; and is taken up by the vast capillary system, and given back to the veins, which return it again to the right auricle of the heart. Then the process is repeated as before. Thus the wonderful machinery goes on until stopped by the hand of death.

But what are the chief *objects* of this perpetual circulation of the blood? Keeping in mind the perpetual waste and repair of tissue, let us view the question in the light that the blood is the vehicle by which the nutriment is conveyed to and the waste products are conveyed from all parts of the body. Thus the pure blood leaving the left side of the heart, is distributed by means of the arterial system to every part of the body: passing through the capillary vessels, it deposits new material, and receives the waste resulting from organic action; when it is returned through the veins to the right side of the heart, as impure or venous blood. In this impure state, the right side of the heart pumps it along to and through the blood-vessels of the lungs, for the purpose of liberating to the external air the impurities, and of receiving oxygen from the air instead. About 1,600 pints of venous or impure blood are thus thrown by the action of the heart into the fine blood-vessels of the lungs every hour; passing through those blood-vessels, in close proximity to the innumerable air-cells of the lungs, the blood receives oxygen from the air contained in those cells, and discharges into the air-cells its impurities, consisting of carbonic acid, water and other matters, to be exhaled from the lungs at every expiration. The object of breathing, then, is to supply this oxygen, and to convey from the body these waste materials. More than sixty pints of oxygen is thus hourly received from the atmosphere by the blood through the air-cells of the lungs, by the act of respiration. This oxygen changes the impure venous blood into pure arterial blood; and nearly sixty pints of carbonic acid is, in the same time, liberated from the system. Hence those who are acquainted with the qualities of carbonic acid will not wonder that an interruption of respiration, as by holding the head under water, for a few moments only, means death. Consequently the necessity of air, of respiration and of the regular circulation of the blood.

Why is pure air better than that which is impure? Because pure atmosphere, as provided by nature, is composed of oxygen and nitrogen in just that proportion which properly oxygenates the blood and meets the requirements of man; therefore, in any other proportion, or when some other constituent is added, as carbonic acid, it is abnormal, and therefore harmful. Thus if a man goes into a well, or a recently emptied beer-vat, where the air is saturated with carbonic acid, he falls, and if not very soon rescued, dies. The burning of charcoal in a close room may generate sufficient carbonic acid to produce death; or, if the damper to a coal stove becomes so turned as to throw the smoke into a bed-room when the inmates are asleep, they may know no awaking.

It is natural to presume from the effects of deadly impure air, that the harmful results follow proportionately with the quality and amount of the impurity; and actual experiments transmute the presumption into a verity. For it has been found that if the atmosphere of a room is charged considerably with carbonic acid, the quantity of this gas exhaled from the lungs is less than when the person is breathing pure air. This demonstrates the fact that a portion of carbonic acid remains in the system contaminating the blood, instead of being expelled, as it would be, were the atmosphere pure.

Besides, wherever a human being is, his lungs are not only constantly charging the apartment, if badly ventilated, with carbonic acid gas, but waste organic matter is as constantly proceeding from his lungs and skin. This doubles the cause of contaminated blood, from retention of dead extraneous matter in this vital fluid; lowers the vital powers, and renders the system extremely susceptible to disease, and especially to consumption, diphtheria, scarlet fever, diarrhœa, etc.

Thus it appears that purity of the air respired is essential to the maintenance in the human system of the power to resist disease. It is true, that owing to the capability of man to adapt himself somewhat to surrounding circumstances, he sometimes may breathe for years a contaminated atmosphere, and not apparently suffer for it; but it is only apparently, for the process

has been constantly preparing his system to fall a prey to illness, and especially to infectious disease, by gradually and continually lowering his vital powers. When infectious disease comes to him it strikes hard. The evidence of statistics corroborates the statement, that the fatality of contagious diseases is generally nearly in proportion to the degree which impure air has been habitually breathed, or contaminated water has been drunk by the patients.

LIGHT AND SUNSHINE.

An ordinary gas-burner consumes about three cubic feet of gas per hour. Since the oxygen of eight cubic feet of air is destroyed by the combustion of one cubic foot of gas, and about two cubic feet of carbonic acid is generated in the process, it becomes evident that our artificial lights are immense destroyers of oxygen, contributors of carbonic acid, and producers of the needs of ventilation. Therefore, in every house, some special means of recourse should be had for carrying off these products of combustion. For this purpose, theatres and other large public buildings are frequently provided with extraction shafts, through which the air, vitiated by gas-jets, makes its exit. For private dwellings, ornamented tubes of tin, placed a short distance above burners, or chandeliers, and communicating with a chimney flue, will answer nicely. These arrangements not only carry off the vitiated air which the lights make, but wonderfully improve the general ventilation.

Many American ladies, unfortunately, love darkness, rather than sunlight, because they fear their carpets will fade: so it often results that their own and their children's cheeks and healths fade, while the carpets may have kept very bright.

Can trees and plants grow healthfully, and mature perfectly in darkness? Did you ever notice a potato that sprouted and grew in a dark cellar? Have you ever seen a child that grew in a darkened house, and who was seldom permitted to breathe the outer air, or to feel the invigorating influence of the sunshine and the weather, lest the little one might take cold or tan? Have you seen a woman who has spent the most of her time in her parlor with the blinds closed and the curtains closely drawn?

Were the potato, the child and the woman "pictures of health," glowing with Nature's complete perfections? These questions need no answers from me; for the man or woman who is capable of being penetrated by observation's feeblest light can give the answers.

So essential indeed is the abundance of pure air and sunshine to good health and long life that people living on the shady sides of streets are more subject to several kinds of illness than are those who reside on the sunny sides. Suitable provisions should be made in every house to meet this want of our natures. To this end the rooms of residences, and especially the sleeping and living rooms, should be so situated as to be exposed, at least for a few hours of the day, to the full light of the sun. The windows, for this purpose, should be large, reaching near to the ceiling; and both the lower and upper sash made to open. The sun's rays should then be permitted freely to enter as honored guests. Hold in fast remembrance that the exclusion of sunlight from the house means not only ill health from the want of light, but, also, ill health on account of dampness. Trees and shrubbery near the dwelling are pleasant to look upon; and since they accumulate malaria and absorb carbonic acid, they are, if properly placed, conducive to health; but these things of ornament and of use should never be so near as to hide the house from the most effulgent rays of the sun.

Besides all these provisions in and around the house, every one should spend much time out-doors, and partake freely of the pure air and the sunlight, and which, as God has made them, carry health, healing and length of days on their wings.

VENTILATION.

Preparatory to ventilation proper, a few aphorisms will be in place relating to the importance of the subject.

1. Sixty pints of carbonic acid hourly breathed out into the air; at this rate how long will it take a half dozen persons to render the air in a close room of any ordinary size unfit for respiration?

2. Since air that has been breathed has lost its health and life-

supporting power, oxygen, and filled the atmosphere of the room with carbonic acid, and contaminated it with the secretions of the lungs and skin, it is neither wise, wholesome nor in good decent taste to rebreathe such air.

3. One may easily prove that respiration does actually give to the air carbonic acid. It is simply this: fill a large vial half full of lime-water. Place one end of a glass tube or a straw in the lime-water to the bottom of the vial, and breathe the air from the lungs, for a minute or two, through the pipe into the vial of lime-water. The clear liquid will soon become cloudy or milky. The milkiness is carbonate of lime formed by the union of the carbonic acid from the lungs and the lime in the lime-water.

Dr. Angus Smith's household test for the presence of carbonic acid in the air of a room is on the same principle: take a half pint bottle, fill it with the air of the room by blowing it in with a pair of bellows, or placing a tube, like the one in the first experiment, into the bottle down to the bottom, and suck the tube, which will suck the air out which is already in the bottle, and permit the air of the room to enter. Then pour into the bottle two tablespoonfuls of lime-water; tightly cork the bottle, and shake it for a few minutes. If no milky appearance of the lime-water shows itself, there is not sufficient carbonic acid in the air of the bottle (which is the same as the air of the room) to form a visible precipitate of carbonate of lime—less, it has been proved, than six one-hundredths of one per cent. of carbonic acid in the air tested. More carbonic acid than this is, according to high authority, injurious to health; and more injurious in proportion to the increase of the gas. When we consider the amount of carbonic acid actually exhaled from the lungs, we may see how easy it is for the inmates of a house to render so great the percentage of this impurity in the air as to be injurious to health; so great even as to poison themselves into disease. Hence the importance of atmospheric purity in our homes.

4. For sanitary reasons chiefly, our houses, churches, school-rooms, and every other abode of man, should be so ventilated as to ensure the air from impurity of every kind, but not for this *only*—one other object is cleanliness and personal decency.

After another has eaten from a plate, or drunk from a cup, we are rather particular to have the plate or cup passed through the ordeal of water, before we partake of food from the one, or touch our lips to the other; yet a half dozen of us will live in a small, unventilated apartment during the day; go to bed by pairs at night in close seven-by-nine bed-rooms; go to a crowded, ill-ventilated church or theatre, and constantly the while take into our nostrils, mouths and lungs, the putrescent and noxious emanations from the breaths and skins of our friends at home, and of the multitude abroad. We never for a moment dream that it is an unclean as well as an unhealthy thing to do.

5. The cellar should be kept in as pure and sweet condition as any room in the house, for the sake of both cleanliness and health. Many diseases have their origin in foul cellars. Therefore if the cellar be damp, drain it, dry it, and whitewash it. If there are decayed vegetables or any other unwholesome thing in it, remove them speedily. Pay strict attention to its thorough and continual ventilation.

6. The total amount of air which one respires and therefore actually consumes, in the twenty-four hours, varies with different persons, and with the same person under different conditions, but the general average as estimated by Valentine is about 398 cubic feet. It must, however, be understood that a much greater amount than this is rendered unfit for breathing, in the twenty-four hours. It is a matter of no small consequence to determine the quantity of air which ought to be allowed each pupil in a school-room, to each member of a family in living rooms, and especially to each in sleeping room. Eight hundred cubic feet should be the minimum, unless more than ordinary provisions are made for ventilation. Even if each occupant is allowed eight hundred feet, the ventilation should be such as to ensure of a change of the entire air three times every hour. How do these estimates compare with the space and the ventilation actually allowed in our schools, and for the families at home? If you will investigate, you will find that in our average respectable homes no more than half this space is allowed; and in the average schools not one-third, and often there is no provi-

sion made for ventilation. God in nature has adapted man to breathe the pure air that he has created, and hence if any human being breathes carbonic acid and filth he may reasonably expect to pay the natural penalty. Yet nature through her law of diffusion of gases seems to solicit and encourage man to perfectly ventilate every abode. The carbonic acid gas generated by the respiration of all animals and men, and which proceeds from combustion of fuel in our cities, if not pent up in unventilated houses, is quickly and almost equally diffused through the atmosphere, or absorbed by the plants and trees. Were it not so, many localities would, in spite of the most thorough ventilation, be so contaminated as to render the continuance of life impossible. The fires for warming our houses further assist in this diffusion, through the difference in temperature of the house and out of door air, so causing impure air to leave a room through the open cracks around windows and doors and as much pure air to enter. Thus, again nature strives to aid those who will not help themselves, and assist those who will.

7. The indifference often manifested by intelligent people concerning the proper ventilation of factories, school-houses, and their own homes, is astonishing and shameful. When nature provides an unlimited abundance of pure air, it is *cruel* for parents to keep their children at school, or themselves at home in a confined atmosphere, poisoned by the carbonic acid and effete matter constantly exhaling from lungs and skin, which slowly but surely undermine good constitutions, lower vitality, invite many ills, and make those ills alarmingly fatal.

8. The thoughtlessness, ignorance or carelessness exhibited by many teachers in regard to ventilation is none the less censurable. They permit the school-room to become over-heated; then open the outside doors, and the windows, and let in draughts, or sweeping young hurricanes upon the children, who have to sit there helplessly and suffer.

The subject of ventilation, to make it complete, requires a book by itself. All that will be attempted here is to indicate a few modes, which, I trust, will be of advantage to some private house builders, and to private house occupiers.

Ventilation means: 1st, the ample and continual removal of the vitiated air from the room; and 2d, a renewal as ample and perpetual of pure air, which is to be warmed before it reaches those who are to breathe it. *Warm, pure air, free from stagnation, is perfect ventilation.*

The royal road to pure air in a house is, of course, ventilation. The great question in regard to ventilation which should engage the deep interest of sanitarians and everybody is what are the best *methods* by which purity of air may be maintained. No kind of ventilation can safely make the air in a house as pure as out-door air ought to be. But the nearer this desideratum is approached, the better it will be for the health of the inmates. The chief difficulties of so changing the air of apartments as to maintain the standard of purity (no more than six one-hundredths of one per cent. of carbonic acid) are the dangers of exposing the inmates to cold draughts, and the indifference of many to the pressing needs of good ventilation.

In order to make a house healthy in the purity of its air, the apartments must somewhat approach a suitable size. It has already been stated that 800 cubic feet of air, which is equal to a room ten feet by ten feet and eight feet to the ceiling, should be allowed to each person, wherever the abode may be. This, it must be understood, is the minimum. A sleeping-room for two persons, according to this estimate, should be ten feet by sixteen feet and ten feet to the ceiling; and a sitting-room for six persons twenty feet by twenty-four feet and the same height as the bed-room. All this cannot be had except in large houses, and large houses many cannot have, but they *can* have provisions for constant change of air all through the house, however small may be the house.

In order to ventilate a house completely, *outlets* for the impure air, and *inlets* for pure air, must be provided, and nothing less should be entertained for a moment. One window cannot properly ventilate a room; no ventilator alone can do it. With this idea as a basis, let us consider a few modes of ventilation.

Where a Furnace or Steam-Heating Apparatus is Used. —When either a hot-air furnace or a steam-heating apparatus is

properly constructed, cold air is conducted from out of doors through cold-air pipes or boxes, into hot-air chambers, where it is heated and then conducted to the apartments of the house through hot-air flues and registers. Consequently an abundance of pure, warm air essentially enters rooms in the process of warming them. Now all that is wanting to make ventilation complete are outlets for the escape of the breathed, impure air. For this purpose, open fire-places are the most efficient. In the absence of open fire-places, any of the following arrangements will serve a good purpose.

1st. *Outlet ventilation* for the vitiated air of a room through the chimney is perhaps best accomplished by a valvular ventilator; Boyle's patent is excellent. It consists of four mica valves placed in an aperture of the chimney near the ceiling. These valves are so constructed that when there is an upward draught in the chimney, the valves open inward to the flue, permitting the impure air of the room to escape. When the draught happens to be *down* the chimney, the valves close, preventing the ingress of cold air. But since the room is warmer than out-door atmosphere, the draught will generally be up the flue, or this may be *ensured* by keeping a small gas jet lighted in the flue.

In case there is no chimney in the room, a ventilator may be fixed near the ceiling in the outer wall of a room, and connected with out-door air by means of perforated bricks. Care should however be taken in the position of this ventilator in relation to the hot-air register, or much heat will be wasted, or but poor ventilation secured. The following arrangements, as figured by Dr. Hartshorne, an excellent authority on sanitary subjects, are efficient.

I, I, I, I, I are hot-air registers; O, O, O, O, O exit ventilator. Figures 2 and 4 are the preferred methods.

G. R. Barker's warming and ventilating flue is successful either for private residences or school buildings. The hot air for heating the room is introduced through a cowl-shaped register, situated in the wall about one foot above the floor. Just under this register is the outlet ventilator, connected with the

chimney flue. In this system, shown by Fig. 5, the hot air, as it enters the room through the register I, rises and is distributed



FIG. 1.

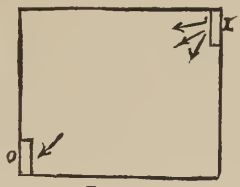


FIG. 2.

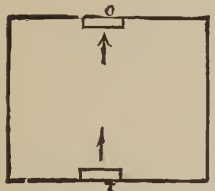


FIG. 3.

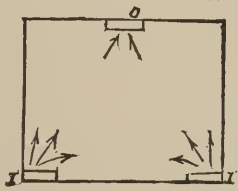


FIG. 4.

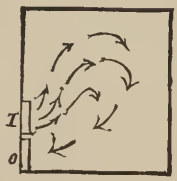


FIG. 5.

From Hartshorne's "Our Homes."

through the room, and as it cools, it sinks and is drawn through the ventilator O, and out through the chimney flue. Here we have, in a house heated by a furnace or steam, sufficient pure, warm air, and a complete removal of the impure air, with freedom from draughts—a fulfilment indeed of all the objects of perfect ventilation.

2d. *Open fire-places*, especially in cold climates, are not often used for warming houses. Where they are used, however, they will admirably serve to convey from the apartments the vitiated air, which may be replaced with pure air through windows or other inlet ventilators. But the upward draught is so great as to draw nearly sufficient pure air through the crevices around doors and windows.

3d. *Stoves.* Houses which are warmed by means of stoves will require special care in regard to ventilation, and various are the systems from which a choice may be made. A few of those systems will now be indicated.

1. The first mode is an expensive though an excellent one, both for private residences and public buildings. A brick air-chamber five or six feet square is constructed in the basement or cellar, and lined with zinc at the top, and having a door at one side

large enough to admit a man. From two opposite sides of the air-chamber, a cold-air box, about sixteen inches in diameter for a rather large house, is constructed, communicating at one end with the air-chamber, and at the other with the out-door air. In each of these cold-air boxes a slide is fitted by means of which the box may be partially or wholly closed for the purpose of regulating the quantity of air to be admitted into the air-chamber, and to the rooms above. The air-chamber is pierced with apertures, in number corresponding to the number of rooms to be ventilated. The diameters of these apertures vary in size according to the dimensions of the apartments, six inches being sufficiently large for a room fifteen feet by fifteen feet. Conductors of tin are placed in the apertures extending to, and communicating with each apartment above, and each conductor terminates with a register, by which the amount of air to be admitted in the room may be regulated at will.

If preferred, the air-chamber may be placed directly under the stair-case hall and communicate with the hall by a single register. The size of this register must, of course, vary from one to three feet square according to the largeness of the house. By this mode the fresh air may when needed be admitted into any or all the apartments of the house through transoms over the doors.

Having in view the self-evident fact that warm, pure air, free from stagnation, is perfect ventilation, we may ask ourselves how this can be secured according to the above mode. So far as now described this mode admits an abundance of pure air, and if we add the exit ventilators for the impure air as described in the mode of ventilation where a furnace is used, we *then* have pure air in motion; all now wanting to make ventilation complete is that the incoming air be warm. This is accomplished by means of a stove placed in the air-chamber, a large, slow combustion coke stove being the best for this purpose. Such a stove will maintain the temperature of the air-chamber at from sixty to ninety degrees. Since that heat is continually passing from this hot-air chamber to the rooms above, it is not lost, but serves in helping to sustain the requisite temperature of the house. Indeed it will alone sufficiently warm a house

in moderate latitudes, or during the fall and spring in cold climates.

2. The second arrangement where stoves are used for warming the house is less expensive than the first, but almost as good, perhaps, is as follows: A tight cold-air box about sixteen inches in diameter is constructed across the cellar, opening at each outer end in contact with the out-door atmosphere. In this cold-air box two movable slides are fixed for the purpose of shutting off or of regulating the quantity of air wanted in the rooms above. Tin conductors about six inches in diameter, more or less, according to the size of the rooms, are constructed to take their origin from the cold-air box, and to extend to all the apartments of the house, and end at registers directly under each stove. By means of the registers the quantity of air wanted in each room may be regulated at will. The stove, under which is the register, heats the air as fast as it comes up through the pipes from the cold-air box, and as the air is heated it rises, and is distributed about the room. Or, if it is preferred, the stoves may be surrounded by a metallic casing so as to give an air-space between. Then the air is heated between the stoves and casings, rises, and is distributed about the room. I cannot, however, see much advantage in these casings, though some important authorities recommend them.

This plan, whether the stoves are or are not surrounded by casings, has again the conditions of good ventilation, pure, warm air in free circulation.

In this, as in the first mode, the vitiated air finds its way out of the house through the chimney valves, or some other arrangement already described.

3. Some may prefer the following, but I certainly do not. Yet it is far superior to window ventilation. In this form, a ventilating tube commences in contact with the external air even with the outer wall of the house, and is made to extend to an inner wall of each room, two feet from the floor. Then the tube is turned upwards along the inner surface of the wall to within two feet of the ceiling. The tube may be ornamented. By this mode, the air, as it enters the room through the tube,

strikes against the ceiling, and distributes itself through the room.

This does not fill all the requisites of perfect ventilation in that the air which enters the house is not warm air; but since all draughts are obviated, the mode is not bad, and for night ventilation during the summer time it is admirable in all residences, and especially in the sleeping-rooms.

In this plan of ventilation the impure air finds its way out of the house by some of the ventilators already described.

4. *Window Ventilation.*—Many will still depend upon window ventilation, and they should understand how it can successfully and most safely be accomplished. It has been stated that one window is inadequate for the proper renewal of the air in any room. Two or more windows should be used for this purpose, and they should reach nearly to the ceiling, and so constructed as to open at both the top and bottom. The air of any part of the house should not be made to serve the purpose of ventilating any other part. Nothing less than the out-door air will do.

In summer weather, except at night, and in the "sunny south," both windows and doors serve very well in the way of ventilation; but during the winters in our northern latitudes, they are more or less unsafe on account of excessive draughts, which so often exist. Therefore great care must be taken in the management of this kind of ventilation.

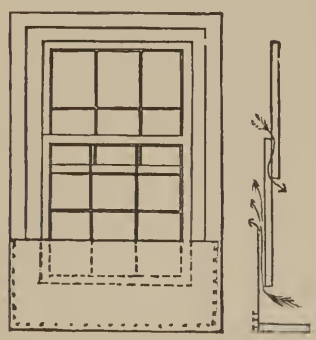


FIG. 6.
From Hartshorne's "Our Homes."

One very good way to ventilate a room by means of windows is to raise the lower sash a few inches, and fit an ornamented board the whole width of the window so as to fill the opening. The air will then enter the room between the upper and lower sash, as shown in figure six, with an upward *current*, at a safe distance from the inmates.

Another and an excellent plan is to fix a fine wire screen at the top of the window so as to unfold

when the upper sash is lowered, and fold when it is closed. This can be so constructed as to permit the sash to be lowered much or little, to suit the amount of ventilation required. The air slowly enters an apartment, ventilated by this plan, and thus prevents draughts.

Or an ornamented board, sloping inwards and upwards, may be fixed eight or ten inches below the top of the window; when the upper sash is lowered, the air will enter a room with an upward current, be distributed through the room and warmed over the heads of the inmates, thus preventing cold draughts.

Maine's elbow-tube ventilator deserves and receives from Dr. Hartshorne and other high authorities strong recommendation. It consists of a board into which is fitted two elbow tubes looking upwards. When the apparatus is placed under a raised, or above a lowered sash, as in Figure 7, the air, as it enters from out-of-doors, is directed upwards, and thus a draught is entirely prevented. Each of the tubes is provided with a valve, by which to regulate the quantity of air needed in the room.

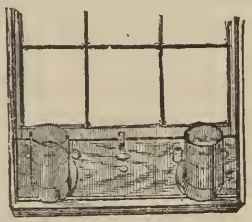


FIG. 7.
From Hartshorne's "Our Homes."

BED-ROOMS, BEDS AND BEDDING.

The greatest fault in the construction of bed-rooms is that they are usually made too small. Many it is true cannot have large sleeping-rooms because their balance at bank is not large. But large, pretentious residences, the parlors of which are regal, often have diminutive sleeping-rooms. It ought to be remembered that we spend nearly a third of our time in bed, where for the great majority of people it is unsafe to maintain as thorough ventilation as they can safely have in sitting-rooms. There is therefore no reason why our bed-rooms should be among the smallest apartments in the house.

No sleeping-room for two occupants should be smaller than fourteen feet by fifteen feet and ten feet to the ceiling. If it must be smaller, the most careful attention should be given to

its ventilation. Indeed, *all* sleeping-rooms should be well and safely ventilated. They should be so situated as to be exposed to the sunlight during as great portion of the day as possible. The windows should be kept open and unshaded all day, until a couple of hours before sunset. During the night there ought also to be ventilation, but the ventilation should be within the bounds of safety.

It is a slow form of suicide for one to sleep in a room where the sunshine and the pure atmosphere seldom or never enter. It is strange that an intelligent human being should voluntarily doom himself or herself to dwell in eternal, sombre shade and odious atmosphere, and feel nothing of the thrift and the joy which others feel who live in pure air, and in the wooing, dancing health-giving sunlight. The air and sunshine are twin blessings in the grand economy of God's universe, and like the rain, they fall upon all who will receive them—the just and the unjust. As under their soft and vitalizing influence, the earth puts on her living green, and blushes in her flowers like the maiden, so under their influence man grows into vigorous manhood, and woman into the radiant beauty of the roses.

Many have a strong conviction that fresh air and sunlight are good enough for the *well*, but altogether out of place for the *ill*. The very day that one of the family is taken sick all the ventilators are closed, and the curtains so closely drawn as to leave the patient in total darkness. This should never be, unless from some peculiarity of the illness it is so ordered by the physician. For the sunlight and the virgin air surely carry healing on their wings.

The Ventilation of Bed-rooms.—Bed-rooms should be large enough and well enough ventilated to secure purity, freshness and sweetness of the air. To insure that, it is not sufficient that the occupants cannot detect morning odor or closeness, but that one entering the room from without cannot detect any. While air is a necessity, and pure air a blessing from which man should not be divorced, cold currents of it, which are sufficiently unsafe everywhere, are especially so to persons in bed. In ventilating sleeping-rooms, therefore, these two main objects ought

to be kept in view: 1, sufficient ventilation; 2, safe ventilation; both of which may be had by means of the ventilating tube as described on pages 165 and 166—No. 3; or by Maine's elbow tube ventilator for the inlet of the pure air, as described on page 167; and an open fire-place for the outlet of the impure air. If Maine's is used, the bed should not be very near the window; and in the absence of an open fire-place, a valvular ventilator should be placed in the chimney, as before described.

In making use of night ventilation in the bed-room, whatever the mode, the amount should vary somewhat according to the endurance of the sleeper and susceptibility to colds. When the bed *must* be so situated as to endanger the sleeper to a draught, something should interpose to turn away the current. Thus if the air in ventilating enters the room through an open window, the curtain can be so turned as to direct the current in another direction, thus: screw three screws, having right-angled arms, in the window-casing on the side next to the bed; one screw near the top of the casing, one near the bottom, and the other in the middle, and on a line with the edge of the curtain. Then have a nice strip of board made about two inches wide, and as long as the curtain, place it in the position so as to clasp the edge of the curtain tightly to the window-casing, then turn the arms of the screws around over the strip to hold it fast. Last, turn aside the other edge of the curtain, and place a chair behind it. This arrangement will turn the current of air from the bed. The strip of board may be put up every night and taken down every morning. The whole thing can be adjusted in a moment's time, and thus secure good ventilation, and the sleeper from a draught and its dangers.

A bed-room should never be perfumed to cover unpleasant odors. Perfumes are not disinfectants, and they do not render the room any more healthy, but often hide illness under the cover of delicious odors. Smells should rather be removed by the use of plenty of soap and water, by ventilation and sunlight, and by disinfectants.

The bed-room slop-pail and chamber vessel in one should have a cover fitting air-tight, which should always be kept *on*

except when it is in actual use. The pail itself should be often and thoroughly washed with water and soap, and then with a disinfectant. Bed-rooms above all other rooms ought to be kept most scrupulously clean and sweet.

A few words about "spare bed-rooms" may here be in place. Most well-ordered families have one or more such rooms, and it is commendable, for it means forethought of the comfort of friends—it means hospitality. The housewife keeps each of those apartments tidy, nice, cosy and in order, and when her guest is shown up to it she feels a little tingling of honest pride. Surely her pride, the purity of her motives, the sincerity of her regard deserve all praise. But have the room and the bed been unoccupied for half a month or more? If so, did she ventilate the air of one, and dry the bedding of the other before her guest occupies them? If she did not, she should in the future, for in unoccupied bed-rooms the atmosphere soon becomes stagnant, and the bedding damp, and pneumonia, bronchitis, consumption insidiously hide there in readiness to clasp the kind lady's friends in deathly embrace.

To some extent the practice prevails of taking the chill and the dampness from sleeping-rooms by means of the burning chips or charcoal in open vessels. The practice is a dangerous one, since the gases proceeding from the combustion of any kind of carbon, when respired, are exceedingly harmful to health, and often perilous to life.

Beds and Bedding.—A good hair mattress placed on springs is the basis of a good bed. Upon the mattress, and beneath the undersheet, a thick flannel blanket should be placed for the purpose of absorbing the cutaneous excretions of the sleepers. By this means the mattress itself will be kept clean and sweet. This blanket should be washed as often as once a month, and the bedding, which must be sufficient but not over-abundant, should receive frequent ablutions.

The dear, prompt, ambitious queen of the household had better not be in too great haste to have the beds made early in the morning, because the bedding during the night becomes more or less contaminated with the emanations from the skin

and lungs. Let her take off the bed-clothes, spread them on chair-backs before an open window and expose them, all the forenoon, to the free air and copious sunshine. No bed should be made until after such exposure. No bedding should be used which cannot be washed.

Pillows.—Good hair pillows are the best for every one all the year round. Feather pillows should not be used, because the head sinks down into them and becomes heated, determining too much blood to the brain, and thus tending to produce congestion, etc.

The proper object of the pillow is to fill out the space between the head and the tip of the shoulder when one is on his side; and on the side is the natural position to sleep. It is, indeed, often unsafe to sleep on the back. The *object* of the pillow teaches what the size should be. If too large, or too small, the neck is bent towards the shoulder, the venous circulation is impeded, and a tendency to congestion about the head induced.

If the above simple directions are followed, if your room during the nights has been neither too warm nor too cold, if your suppers have been early and light, you will probably awaken in the morning rested, invigorated, buoyant, new, and with a far greater probability of uniform health and of long life.

KEEP YOUR MOUTH CLOSED.—In common parlance this admonition may mean more than my fair lady friends would willingly practise. It is not my object nor desire to undertake the prohibition of what is so profoundly natural as is the free use of the tongue. Talk on, dear ladies: your sweet-toned words floating to the ears, coalescing with the deep respondent nature of the ruder half of humanity, make up a pleasant harmony in this beautiful realm of God.

Some persons, however, have the rather ungraceful habit of being down, not so much "in the mouth," as in the lower jaw; of holding the mouth ajar when it would be equally convenient and more wise to keep it closed, and that is what is meant in this section by keeping the mouth closed.

More or less of organic pollutions, *germs* from which many

diseases spring, are forever and everywhere floating in the atmosphere. Where and when those pollutions are not intense, they are comparatively harmless to vigorous persons, because the reactive forces of their systems are strong enough to successfully resist them. It is only in the feeble or in robust persons out of health, or under other unfavorable circumstances, that those ordinary emanations prove so frequently baneful. The danger increases of course in proportion to the intensity and kind of the disease-producing germs, as when they are sufficiently noxious to produce illness in the most robust. Why is the danger increased when the mouth is open? Simply this: Nature has bent the nostrils from a straight line, and filled them with hairs, thus making them natural trapped respirators. Thus pollutions usually find a lodgment before reaching the throat, or general system, and are mostly blown out again. Whereas, if the mouth is open in inhalation, the course of the air and of whatever the air contains is directly upon the throat, entirely unfiltered. Consequently besides the danger from direct inspiration of impure air, when the mouth is ajar, in cold weather, the course of cold air is too direct and intense on the respiratory organs, and has a strong tendency to produce throat and lung affections. It will therefore be seen that one condition of good health and long life is that we breathe pure air through the nose.

MODES OF WARMING THE HOUSE, AND RELATIVE MERITS.

The word comfortable is a capital English word. Your house may be costly and elegant, food sumptuous, wealth unlimited, but *comfort* wanting.

In our northern latitudes, during the keen coldness of winter, one essential requirement to comfort is warmth. However desirable cool heads may be, we need, at any rate, warm houses, warm clothes, warm feet, warm beds, warm food, warm hearts.

Of comfort as applied to temperature, it should be understood that simply to *warm* a house is not all that ought to be considered, but the *best mode* of warming. That means very much in a sanitary point of view. A perfect system of warming a house involves the following chief conditions: 1st, sufficient warmth; 2d, an equable warmth throughout the apartment; 3d, a warmth attended by the least destruction of the atmospheric oxygen; 4th, a warmth without unsafe currents of air; 5th, that which will give to the air of a room the least gas and dust; 6th, that which will best facilitate a complete ventilation; 7th, economy of fuel.

Let us examine the chief modes of warming, and we will find, perhaps, how far each fills the conditions of perfection.

OPEN FIRE-PLACES.

It may be said in a general way that an open fire-place lends a cheer to a room which no other warming apparatus can give. Its excellence as a ventilator for the egress of the impure atmosphere of an apartment is beyond question. But here end, unfortunately, the storied charms of open fire-places. Crowded to its utmost capacity in a cold day, it may indeed send forth a scorching heat as far as the hearth-rug. Further than this limited bound the opposite rushing torrent of cold air bids it not go. The glorious wood-fire will devour an enormous amount of fuel; and fire-places of the most ancient dimensions may be recommended to those who have a superabundance of wood which they want to burn for the pleasure of *seeing* the glowing comfort, without feeling it, except with a chill. Open fire-places have a fair fame for healthfulness. Is it, do you think, healthy to heat our one side to a red heat, while the other side is shivering from the cold? We have four modern fire-places in our house, and they answer very well for warming the rooms, during the seasons of the year in which warm days are followed by cool evenings; but in cold weather they are unused, except for ventilation, and are as cold as their marble casings.

Let us examine a little closely how far this mode of heating will fill the requisitions of a perfect mode.

An open fire-place heats a room by direct radiated heat. Now, according to the law of radiation, the heat diminishes in the ratio of the square of the distance. Thus the heat at eight feet from an open fire is sixty-four times less than at the distance of one foot. Hence in a cold day sufficient warmth through an apartment is next to impossible; it takes a great deal of fuel to make an attempt to keep the room warm; and the warmth through the room is exceedingly unequal. An open fire-place does not, therefore, fill the first, second, and seventh conditions of perfect warming.

Again when a fire is burning in an open fire-place, as fire-places are usually constructed in this country, a strong and unsafe current of air is established in the direction towards the fire. Therefore this mode of heating is at fault in the fourth requisite of perfect warming. This objection may however be in a measure obviated by constructing a valvular air passage from the atmosphere outside of the house, to the fire-place beneath the fire-bars.

As to the fifth condition, there is no great objection; as to the third, it uses up or conducts away a great deal of air; and as to the sixth, it is admirable, as a facilitator of ventilation.

The conclusion must essentially be that in northern latitudes, during the winter, open fire-places will not answer any perfect purpose of heating. When we have said that the fire in the open grate, or the "glorious wood-fire," is beautiful to behold, and an excellent outlet ventilator, we have said all. Therefore let open fire-places still be made; let one be in every living-room, and especially in every sleeping-room, but let them be used in this climate as ventilators alone, except during the moderate coolness of early autumn and late spring.

HEATING BY MEANS OF STOVES.

Since stoves are so generally employed, it becomes a question of deep interest, in the light of good sanitation, how far are they perfect as a system of warming. A good stove fills the first condition, for it furnishes sufficient warmth; and the second condition, since the warmth it furnishes is quite equable

through the apartment; and the fourth, as cold draughts are not created; and the seventh, as it is economical in the use of fuel.

Stoves are somewhat permeable to the gases; cast-iron rather more so than wrought or sheet-iron. Yet carbonic acid gas does not perhaps escape through the iron of which stoves are made in sufficient quantities to be very harmful to health, unless heated to redness or nearly so. But stoves are liable to crack, and carbonic acid or carbonic oxide to leak through the cracks; also between the joints at which the different pieces of the stove are put together. Chemists have also ascertained that cast-iron holds within itself more or less sulphur, phosphorus, carbon, and often arsenic, the products of the combustion of which are emitted more or less when the stove is heated to a high temperature. Hence wrought-iron stoves are to be preferred to those made of cast-iron.

It will be seen by the above paragraph that stoves do not well meet the fifth condition of a perfect heating apparatus. This fault may, however, be partially and only partially obviated by using stoves sufficiently large to warm the apartment without heating them very hot.

A stove as usually constructed and managed in this country does not fill the sixth condition—to facilitate ventilation. On the contrary, it has a tendency to *exhaust* the air of a room, consume its oxygen, and dry up the atmosphere that remains. The fault of the obstruction of ventilation may mostly be removed by feeding the stoves with air (to support combustion) conducted through pipes from out-doors. This should always be done, and the stoves so constructed as to allow it to be done. In this case the outer orifice of the air-supply conductors should not be near to any source of impure air, as drains, privy, etc.; and the outer orifice should be bell-shaped, so as to collect the air with facility; and covered with wire gauze to protect the conductor from invasion of insects, etc. The inner ends of the air tubes are to open beneath the stoves and the fire-bars; and the amount of air admitted and needed must be regulated by an inlet ventilator.

Dryness of the house atmosphere should be obviated by keeping water constantly evaporating upon the stove. Of course, provision must be made for the exit of the impure air of the rooms.

It follows that stoves, if properly constructed and properly managed, are not very objectionable as a means of warming residences.

HOT-AIR FURNACE HEATING.

The minute structural details of a hot-air furnace need not be given here. This may be left to the manufacturers, and to the dealers and furnace-setters. But in a general way of description, a hot-air furnace is situated in the basement of the house, and brick-set—that is, surrounded by a wall of bricks—or not brick-set.

If properly constructed, a cold-air conductor, varying in size according to the dimensions of the house to be warmed, and the size of the furnace, is placed with one extremity communicating with the out-of-door air, and the other end with the hot-air chambers and flues of the furnace; with these the hot-air pipes are, in their turn, connected. These hot-air pipes thus connected with the hot-air chambers extend to the rooms above, and open by means of registers; and the registers are to regulate the quantity of heat wanted in the apartments of the house.

Let us now inquire how nearly does a hot-air furnace fill the requirements of a perfect system of warming. The first requirement as before named is *sufficient* warmth, and a good furnace gives it. The second is *equable* warmth through the room, which a furnace gives in a fair degree. I am aware that hot-air furnaces and steam-heating apparatus have been objected to on the seemingly plausible ground that the heat as it escapes through the registers ascends to the ceiling, and presses the cold air down towards and to the floor, thus freezing the feet, and roasting the head. The following experiments made in a residence warmed by a steam-heating apparatus through registers will be sufficient evidence that the above objection is practically groundless. In four experiments in a room eleven

feet from floor to ceiling, heated by a stove, the average difference between the floor and ceiling temperature was eleven and a half degrees. In four experiments in a room eleven feet from floor to ceiling, warmed by a steam-heating apparatus, through a register, the average difference between the floor and ceiling temperature was twelve degrees. That is practice against theory.

The fourth requirement a properly constructed hot-air furnace fills completely, as it gives no unsafe cold draughts at all.

For the amount of space that it is made to heat, a furnace is economical in the use of fuel; thus meeting the seventh condition: and the sixth condition, if the apparatus is properly constructed and put up. The common great fault with respect to its facilitating ventilation is that the cellar air is often made to feed the hot-air chambers, and therefore the hot air which enters the apartments of the house is cellar air. This should never be, for cellar air can never be depended upon for purity. As before stated it should come from out-doors through conductors made for the purpose, and these conductors should open far from the vicinity of cess-pools, drains, privy, etc. *Then* the rooms warmed are constantly receiving pure warm air, and nothing is wanting but outlet ventilators to make ventilation complete; and open fire-places as has already been shown are of superior excellence for that purpose; or in the absence of these, some of the other ventilators before described will answer a good purpose.

The great objections to a hot-air furnace, which have foundation in fact, are, 1st, its failure to fill the fifth condition of a perfect warming apparatus; 2d, the liability of its becoming over-heated; and 3d, the more or less irregularity of its fire.

As to the first objection, it is well to remember what has been before stated, viz.: that the iron of the furnace when very hot is permeable to gas, and that contained within itself are carbon, sulphur, phosphorus, etc.; the products of which, when the furnace is heated to a high temperature, are emitted to the atmosphere of the house. Hence, even when a furnace is new, and especially if made of cast-iron, these noxious gases escape,

and are more or less respired. Besides, cast-iron furnaces are liable to crack; and whether cast or wrought-iron, some of the joints ere long open, all of which give gas and dust some freedom of escape.

2d objection. The over-heating to which a hot-air furnace is almost essentially liable so changes the hygrometric and electric qualities of the air, by burning and drying it up, that respiration is made oppressive, and the condition of the house unhealthy. This objection may be partially and only partially remedied by constantly evaporating water in the hot-air chambers. And this is almost universally more or less neglected.

STEAM-HEATING APPARATUS.

It is not necessary for me to describe the minute structure of a steam-heating apparatus, but it may be well to give a few hints which should never be neglected.

1. Whether a house is heated through registers (which is preferable) or by radiators, it should be insisted upon that all the hot air that comes up through the registers and all the ventilation of the radiators be pure out-door air. No cellar air should be allowed to enter the hot-air pipes, directly or indirectly, and no radiator should be without connection with the out-door atmosphere for ventilation; radiators are often without such connection.

2. In the construction of the apparatus, provision should be taken for the free and perfect removal of the condensed water. The presence of water in the steam-pipes will prevent the latter from filling with steam, and if they are made of cast-iron it may cause them to burst. The condensed water may be made to run back into the boiler, or it may be received in a vessel and used for kitchen purposes.

3. When there is no steam turned on, the steam-pipes are of course filled with air. When the water in the boiler is heated, the steam can fill the pipes only as the air is pushed out by pressure of the steam. Hence air-vents will be put in; and I would advise first-class automatic air-vents for this purpose: any other kind is likely to be neglected, and the atmosphere as

a consequence will be filled with steam, or the pipes will not fill with steam.

4. An automatic draught to regulate the amount of fire and of steam should be fixed to every steam-heating apparatus. If this is nicely adjusted, the steam will remain uniformly where it is set. Thus if a pressure of two pounds is wanted, set it there, and there it will remain until you move it, or until the fuel burns out.

5. In putting the steam-pipes together, proper allowance must be made for their elongation when heated, or else the joints will be loosened.

6. When all the steam-coils are heated in one hot-air chamber (which is preferable), and the hot air is thence conducted to the rooms above through hot-air pipes, there should be two cold-air boxes, from two opposite sides of the cellar, reaching to the out-door air at one extremity, and to the hot-air chamber at the other. Each of these cold-air boxes is to be provided with a valve which may be opened or shut at pleasure. Either of these boxes can be used according to the direction of the wind; and any or all parts of the house can then be warmed on *any* day. But if you have only one cold-air box, the air will not come up freely through some of the registers when the wind is in certain directions.

7. Lest the warmth may not be quite equally distributed, or fail to go where wanted, even with two cold-air boxes or cold-air conductors, it is well to provide the hot-air conductors with suitable valves by which to further regulate the distribution and direction of the heat.

In a word, the whole apparatus should be rightly constructed, for which a man skilled in steam-fitting is the only proper person.

A good steam-heating apparatus furnishes: 1st, sufficient warmth; 2d, a fairly equable warmth through the apartment; 3d, no part can become heated to a higher temperature than that of steam; the fire is fed by cellar air, and hence is not destructive to the atmospheric oxygen; 4th, no cold or unsafe draughts are created; 5th, it emits no gas or dust; 6th, if con-

structed properly, it grandly facilitates ventilation, and all that is needed to make ventilation complete is outlet ventilators for impure air. If such outlets are not provided, there will be an uncomfortable sensation of pressure to the occupants of the warmed rooms, and the air will be impure. This, you may be assured, is an important fact, and one very often neglected. 7th, it is as economical of fuel as any other mode of heating the same space.

A steam-heating apparatus is as easily managed and with as little attention as a hot-air furnace, but no part of its management should be forgotten or neglected.

It does not *wear out* when in use as much as it often *rusts out* when not in use. When the weather in the spring becomes warm enough to do without a fire, in order to prevent this rusting out, the water must be let out of the boiler in the following manner: 1st, get up steam and then let the fire go down; 2d, dump the grate ; 3d, empty the boiler quickly while all the steam-pipes are hot, and this heat in the boiler and pipes will dry the whole apparatus. Then if the cellar is kept dry and well ventilated through the summer no part of the apparatus will rust much, and it will endure so long that in the end its expense, I am confident, will be less than hot-air furnaces for the same length of time.

It has been thus found that a good steam-heating apparatus fills all the conditions of a perfect system of warming, and if properly managed it is the most perfect system, excepting hot water, at present known to science; between steam and hot water there is very little choice. Either will give to a house the delicious comfort of perfect summer air.

TEMPERATURE.

It is not conducive to health to keep a house too warm or too cold; the most desirable temperature being, perhaps, for living-rooms, from 65 to 70 degrees; and for sleeping-rooms, from 50 to 55 degrees.

INFANCY



THE MANAGEMENT OF INFANTS, CHILDREN, AND YOUTH, IN HEALTH AND IN DISEASE.

"When first thou camest, gentle, shy and fond,
My eldest born, first hope, and dearest treasure,
My heart received thee with a joy beyond
All that it yet had felt of earthly pleasure;
Nor thought that any love again might be
So deep and strong as that I felt for thee."

. . . . . .

"In a rosewood coffin a baby lay—
Its mother had wept the long night away
Watching its slow, dying breath.
With it clasped to her breast, she prayed to keep
Her darling baby from going to sleep
In the cold, cold arms of death."

It is said that there are words in the English language more expressive of hatred than of love. Be that as it may, it is certainly true that no words can adequately express our *utmost* affection for our little ones. When our child is in ruddy health, what more can we say, expressive of our great, profound love, than to call it darling? When its little heart ceases to beat, and its face turns to marble, what stronger or tenderer words can we utter to manifest our deep, keen, throbbing affection than that our baby is—was—oh! Saviour—a part of our own life, and soul, and very being? Yet those words are vain and empty when our love is so full. That our children are heaven-given little jewels that lend to the home much of its brightness, and sweetness and joy, is the profoundest heart-beat of every humane parent. When death takes them from our homes, and we behold them transplanted to the bosom of God, it is nothing strange that with this *one* consolation, a crushing agony strikes and shocks us with the force and stillness of an arrow.

The child has been described as a "little, creeping, picking, pulling, tumbling-down piece of activity." A helpless, tender, tiny thing, thrust upon a rough world, and sometimes upon parents rougher and meaner than the world. Fortunate, then, if it meets a mother who shall prove herself not only a pro-

tectress in law, but a guardian angel in fact: who in her divine office shall fold her child to her bosom, bearing the force of the storms, and shielding in every way the dear one that God has given her. In view of her responsibilities with regard to the future weal of her child, a mother often feels herself incapable to be such a guiding angel. What if her dear one should sicken, or die, or grow up amiss, a creature worse than worthless —a drunkard, a criminal, a shame? In the awful presence of the duties before which she stands, she asks herself incessantly, with all the anxiety of her mother's soul, "How can I lead my child along in safety, shape the plastic body perfectly, and cause to be woven a character of beauty?" In many cases the question is much more easily asked than answered. The writer is not so presumptuous as to suppose that he can fully answer it for her. But having given the subject much thought and study, he may, perhaps, assist in their noblest of all undertakings, some solicitous mothers who have not had equal opportunities with himself to give it practical thought. If successful, the great satisfaction will be his great reward.

The most *easy* way to manage children, and if we take some easy people as our guide, the *best* way, is not to *teach* them, but to *let* them manage themselves. If under parental abandonment, they thus grow up to adult and old age, and down to meanness, dissipation and villainous dishonor; or if they recklessly run against a snag and lose health, or are killed, it is one of the most comfortable things in the world to lay it all to an inscrutable Providence, and so dismiss the whole matter.

These pages, however, are not addressed to that sort of mother; but rather to her who *cares* for her child. To her who not only remembers that, to win her little one, she went down into the valley and the shadow, and came back worn and wasted; but after receiving it, is ready with all maternal tenderness and love, to watch over it, and if need be, lose her bloom and freshness in the watching. Such a mother cannot, nor *will not*, heaven helping her, permit her child to become weakly, sickly, recreant, truant, false. She lives in the consciousness that her child's physical health and intellectual character, what-

ever they may become, are almost entirely formed under her direct or indirect personal influence and guidance. She feels almost alone responsible for the issue. Therefore it is not marvellous that she is oppressed with the intense and crushing weight of these responsibilities. Strange indeed if she does not feel them, and if she does not grasp with avidity all the aid within her reach to assist her in her grand and dominant mission. If such a mother fails, or if she must consign her child to the grave, her weeping is not like the spasmodic weeping of a careless, thoughtless, indifferent, or passionate mother, but of one who "has done what she could." So strong, tender, undying is her love, that her sorrow, like Rachel's, refuses to be comforted. Unforgotten cherub—unforgetting mother, whose heart is full of anguish, the fountain of whose tears is sealed.

According to the Report of the Board of Health of the City of New York for one year, 14,208 children died. The whole number of children under five years was estimated to be 132,000. The deaths that occurred among children under *one* year of age showed a much larger percentage. This is, perhaps, about the average annual mortality among children in New York, and other large cities; somewhat less in some smaller cities, and some country places.

The all important question is, can anything be done—can any management be successfully pursued, to make our children safer, and their survival more sure?

From the moment a child is born—indeed before it is born, it is subject to certain physical laws, which are as unchangeable as Deity. As long as the life is in harmony with those physical, sanitary laws which environ the child, it is safe. But if previous to its birth, its mother dies, so does the child soon die. If the parents, and especially the mother, were diseased at the time of conception the influence will be more or less felt by the child that is to be. So will the influence be felt for the worse or the better if the mother, during her pregnancy, is diseased either in body or mind; or if her conduct is especially bad or especially good. If after the child is born, it is thrown into deep water, it will drown, as a fish will gasp its life away on dry land. The baby was

not made for the medium, water; the fish was not made for the medium, land. If the infant be fed with improper food, it will not thrive, and will perhaps die, because nature has so constructed it, that certain foods are almost as incompatible with life as the deep water. Thus all the way through the laws of sanitation.

If the mother will go with me, we will see if we can find appropriate surroundings for her child, and thus save it from much suffering, and from the grim messenger which calls away so many of the little darlings. When your child is ill, careful, skilful treatment is most desirable. But is it not far better to keep your child *well?* Sickness does not come without an adequate cause; and most of the causes are *avoidable.*

THE PRE-NATAL INFANT AND ITS MOTHER.

I have said that the child is subject to special physical and mental laws even *before* it is born. If you or your husband were suffering from certain diseases at the time of the conception, or if you or he had some hereditary affection, then your child is liable in its pre-natal state to be infused with the same disease. (See subject Heredity, in another place.) If during gestation, one disobey the laws of physical or mental health, as imprudent eating, improper dressing, etc., or one should exercise an unamiable disposition, or unchaste thoughts, etc., the child will be liable to deviate from what it ought to be, somewhat in proportion to that misbehavior. Thus you see how early begins your responsibility to the welfare of your little one. A hint will, I trust, set you thinking, put you on your guard, and cause you to act accordingly.

When the hour of your trial has come,—when you expect soon to feel the mother's beatitude, *others*, in your interest and in the interest of your darling that is to be, have *their* responsibilities, the chief of which we will now briefly mention.

THE ROOM.—The room in which you are to be confined should be the most pleasant, the most quiet, and the most airy in the house. In cold weather its temperature should be kept at 70° Fahrenheit.

FIRST STAGE OF LABOR.—When the first stage of labor commences, the room should be supplied with fine soap, oil, wash-dishes, towels, cloths, and some sort of a night-chair. The patient should never be allowed to use an ordinary water-closet or privy. I said the room should be supplied with *wash-bowls*, for such utensils are commonly used for several purposes; for instance, the nurse or physician does not care to wash their hands in a wash-basin after it has been used for the patient to vomit in.

The nurse should also see that plenty of hot and cold water is kept ready in the kitchen. She should likewise have ready two stout strings or pieces of tape for tying the umbilical cord; a bandage suitable for the abdomen of the mother; a change of clothing for her, and the clothing, etc., for the child.

The patient's bed should be a mattress, for the hips will sink too low in a soft bed, as of feathers. The hips even then should be raised a little by placing a hair-pillow or some other unyielding article under them. The bed should be placed out of a draught of cold air, and out of the direct heat of the stove.

Next to the mattress there should be spread a rubber cloth; over the latter a sheet; then some folded cloths, and over these another sheet. Then when labor is over, the first sheet and the cloths can easily be slipped out, leaving a dry bed for the mother.

The bedding should be warm enough and yet light.

Also, the nurse, if the patient's bowels have not been very free, should give her at the commencement of labor a pint of warm water with a tablespoonful of salt as an injection. And all the way through care must be taken that she passes water often. These attentions will facilitate labor.

It often happens, especially in the country, that no physician is present during labor. In such cases the nurse has certain other duties to perform, and she should inform herself of them.

Every woman should learn them, for she may at any time be present in a case of emergency, when some knowledge in regard to these things, and not panic, will be demanded of her. Let us then study the chief of those duties together.

In every case, excepting with those women who are known to have sudden delivery, the patient during the first stage of labor may be allowed, and even encouraged, to be up and around the room with a loose dress on. But she should be put to bed as soon as the pains pass from back to front, or "bear down." The nurse should at this stage make an examination as to the position of the child. Even if quite inexperienced, she ought to be able at least to learn whether the head presents itself, by its hardness and by the fontanelles, or openings between the bones. This examination is to be made both during and in the absence of a pain. After once finding out that all is right, the examination ought not to be often repeated during the first stage of labor —not until the presenting part of the child approaches the soft parts of the mother, for too much intermeddling has a tendency to retard labor.

If any part of the child other than the head presents, and especially if it be an arm or a shoulder, a skilled physician should at once be in attendance.

The position should be early known; but if the nurse has been unable to satisfy herself in regard to it *before* the rupture of the membranes and the discharge of the waters, she should by all means make herself *sure* as soon as that event takes place, even if to do it she has to introduce her whole hand, previously oiled. Waiting is not safe, for if the presentation is wrong, the time for correcting it is short after the waters break. In making the examination, she should also pass her finger around the head for the purpose of finding out if there is some other part of the child, as the umbilical cord or an arm, descending on a level or still nearer with the head.

After the patient has gone to bed, she may take her position either on her side or back, and change from one to the other. But towards the last part of the second stage she must keep *one* position, and I prefer the left side.

SECOND STAGE OF LABOR.—In the second stage of labor, when the os uteri (mouth of the womb) is fully dilated (opened), and the head is descending below it, an examination must be made from time to time for the purpose of ascertaining if the head advances *during* each pain; and if it recedes a little as the pain passes away. For the head should thus advance and recede. Indeed if it does not, the immovability demonstrates the fact that you have a hard case before you; and one which will very likely require instrumental delivery.

The hand of the nurse, during the latter part of labor, should be placed upon the vulva, for the purpose of knowing when the soft parts are being pressed upon, and dilated, and stretched by the advancing head of the child.

The patient should not, in the first stage of labor, be urged to assist herself by pulling, "bearing down," etc., for such efforts at this time can do no good, but can do harm by exhausting her. And indeed she should not be urged very much, even in the second stage, to assist herself as above, for the requisite efforts will generally irresistibly come, when nature demands them. Sometimes the patient from excitement breathes too rapidly; in that case she should be requested to hold her breath during the pain, and it will be of much advantage to her. Try to make her feel resigned to her condition, and not fear, and she will generally do about as she ought.

Great caution is demanded, in the second stage of labor, as to the patient's sitting on a vessel or night-chair when she desires to defecate. This desire is caused, near the end of labor, by the pressure of the fœtal head on the rectum, and shows only an advanced nearness of the child; and if allowed to so get up, the birth may take place and much injury be done both to mother and child.

It is a matter of great moment, especially if it is the first child, that the head pass through the labia (external opening) *slowly;* for otherwise the perinæum may be ruptured. The nurse should, therefore, if she finds at this stage the head advancing with an unsafe rapidity, lower the head of the patient, direct her to breathe rapidly, and not bear down. And also,

whether the head is advancing rapidly or slowly, the nurse should, for the purpose of preventing a rupture, place her hand upon the perinæum, as soon as it becomes a little distended, as follows: if the patient is on her back, and the nurse on the right side of the patient, the nurse is to pass her right hand over the right thigh, and place it with the fingers spread over the perinæum, and give a steady but gentle support during every pain. Some authors advise in giving this support to draw the perinæum forward, and an occasional one says draw it backward; I should say *neither*, but let the pressure be direct and equable. Whatever be the position of the patient, the principle of support is the same.

Too early support, however, is harmful. The nurse must be watchful, that she may know when her assistance is needed; and it is needed when she finds that the pressure of the head on the soft parts is so great that a rupture *might*, from an impetuous pain, take place without support. After such aid is required, it must be continued till the head and shoulders are born.

As soon as the head is born, she must ascertain if the cord is around the neck of the child, and if it is, she is to carefully loosen it up, and slip it off the neck over the head. If not successful in this, she must loosen the cord, so that it will not strangulate the child; and wait until after its birth. But if unsuccessful even in *loosening* the cord, she may cut it apart, and have the cut ends firmly compressed by the fingers of an assistant, until they can be tied.

A short interval usually elapses, after the head is born, before the body of the child makes further progress. Sometimes this interval is dangerously prolonged. The midwife must hence be vigilant, and if the face of the child becomes blackened, the abdomen of the patient should be rubbed for the purpose of quickly re-establishing the pains; and if this fails, she must pass one of her forefingers into the vagina, to the upper part of the babe's arm, upon which she is to hook her finger, and make careful but firm traction until the child is born.

An assistant should, as soon as the head is born, be directed to make, with her flat hands, steady pressure upon the abdomen

THE SICK ROOM



of the patient, until the bandage is put on. This will nearly always prevent dangerous uterine hemorrhage, by sustaining uterine contraction. Yet if, in spite of this, profuse flowing ensues after the birth of the child, and if friction of the abdomen does not bring on pains, then the placenta (after-birth) must at once be delivered.

Under ordinary circumstances the cord should not be cut, until the child breathes regularly; then it will usually cry quite lustily.

Previously to cutting the cord, it should be tied about three or four inches from the abdomen with a strong string; and again about six inches from the abdomen, and then cut between the ligatures.

But if the child does not breathe at all, or only gasps, and if the arteries of the cord do not pulsate, the cord should be tied and cut immediately. If, however, the face of the child is darkened and congested with venous blood, the cord may, after cutting, be left to bleed a little before the ligatures are applied. If, however, the child does not breathe, and if there *are* arterial pulsations in the cord, the latter should not be cut until respiration is established, or the pulsations cease. In any of these cases, artificial respiration must be had recourse to. (See method under What to do in Cases of Emergency.) Besides the artificial respiration, a little cold water is from time to time to be dashed from the hand on the face and chest of the child; the back of its throat tickled with a feather, and sudden, forcible breaths blown on its face.

In the regular course, as soon as the child is born, if it and the mother are in good condition, the nurse must attend to the after-birth. Her business here, if there is not alarming hemorrhage, is simply to let it alone until it is detached from the uterine walls, and is loose in the vagina. Until *then*, traction upon the cord by an unskilful hand, may break it, cause dangerous flooding, or invert the uterus. But when, on examination, she finds that the placenta is actually loose and in the vagina, the nurse should take hold of the cord with one hand, and make pressure on the abdomen with the other, and make moderate traction until the placenta is expelled. Even then, since she

may not, perhaps, be *sure* that it is wholly detached from the womb, the traction had better be made *only* during a uterine pain. When the after-birth makes its appearance between the labia, it is to be grasped with one or both hands, and removed *slowly*, lest otherwise portions of the membranes be left behind; and after the removal the nurse should *know* that all the placenta and all its membranes are really away. The time it takes Nature, assisted by art, to remove the placenta, after the child is born, will vary from a moment to half an hour.

Next the nurse is to lay her hand over the region of the womb to find out whether it is properly contracted. If it is, it will feel like a hard ball. If it is not, abdominal friction should be used; and if that fails, a teaspoonful of the fluid extract of ergot should be administered: for there is danger of profuse hemorrhage. She is also to examine the womb per vaginum, for the purpose of proving that it is in its place, and that no part of the placenta or its membranes is left behind. And then the abdominal bandage is immediately to be applied—snugly and evenly, but not with that tension to cause suffering.

Sometimes, after the labor is all completed, and apparently *normally* completed, dangerous hemorrhage ensues. Not often, however, if steady pressure of an assistant's hand has been maintained on the abdomen of the patient, from the time of the expulsion of the head of the child, until the bandage is put on the mother. But if it *does* occur, her hips must be elevated by placing folded blankets or a hard pillow under them, and blocks under the legs of the bedstead at the foot. Then abdominal pressure, and slow, circular friction must be made. If too profuse flowing still continues notwithstanding these proceedings, cold water must be applied to the abdomen during every alternate five minutes. For a constant and prolonged application of cold takes away reaction, and causes that which you would cure. While using the cold water, also give a teaspoonful of the fluid extract of ergot every hour for three doses, if need be.

In case any untoward symptoms take place, a physician by all means should be at once called. And indeed in all cases where it is reasonably possible, a physician better be in attendance;

for while in twenty cases, perhaps, a well-informed nurse may be as successful as a physician because all is right, she may totally fail in the twenty-first case, because something is wrong, and she has not the skill to right the wrong; and the patient, or child, or both, may lose their lives as the price of the mistake. The nurse has no reason to think that there is no practical value in her knowledge of these things, even if she never take charge of a midwifery case. *Every single* thing she knows has indeed a *great* practical value, when she acts only as an *assistant* to the attending physician.

THE PUERPERAL MOTHER AND HER CHILD.

The word puerperal is derived from the Latin words *puer*, meaning a boy, or child; and *pario*, to bear, or bring forth. Hence puerperal means a woman in child-bed; or, relating to parturition and its consequences.

The puerperal state of the mother, as the term is here used, is her condition from the time her child is born, until all the parts which have undergone a change during her pregnancy and labor have been restored to their normal condition. The time which must elapse in these processes of restoration is from four to six weeks. And the puerperal state of the child, if my medical friends will allow me to use the expression, may for convenience be said to extend during the same period. To insure the mother's and child's safe passage through this period, the nurse must know and perform her duties.

1st. We will inquire very briefly what *are* the duties of the nurse as it regards the mother. She has passed safely through the trying ordeal of labor, and greets her little one with the kiss of a mother's love. And now for a good recovery.

The inner wall of the womb, to which the placenta was attached, is raw, bleeding, and it, with the surrounding parts, are susceptible to inflammation; and the patient to all the ills that a puerperal woman is heir to. Hence great care and educated

prudence are required on the part of both nurse and mother to make safety sure.

The air of the room must be kept pure, yet free from draughts; the temperature equable, and everything scrupulously clean and in order. To aid in the general purification, carbolic acid, or chloralum, should be daily used through an atomizer, or in the absence of an atomizer, *sprinkled* upon the under surface of the bedding, and on the napkin over the vulva.

The lochial discharge is a discharge from the uterus, following delivery—bloody during the first two or three days, and greenish-colored, and of a peculiar odor afterwards. Its duration, quantity and character vary in different cases; but its average continuance is from fourteen to twenty-one days. If this discharge ceases suddenly and prematurely, a hot poultice, upon which some powdered camphor is sprinkled, and applied to the parts, will generally restore it; and the poultice may, if necessary, be assisted by a few half-drop doses of the tincture of pulsatilla.

Or, if the discharge emits, at any time, an unnatural odor, as of putridity, the following mixture should be once or twice daily used with a female syringe: Saturated solution of carbolic acid one teaspoonful, warm soft water one-half pint; mix—increasing or diminishing the strength of the solution according to the sensations of the patient. It never should be so strong as to produce pain. In using these injections, great care must be taken *not* to throw them into the womb; but into the *cul-de-sac* beyond the mouth of the uterus.

After the child is born, the placenta expelled, and the bandage applied, the mother and all around her should be *absolutely quiet* until the uterus has perfectly contracted, which may, as before stated, be known by its hardness and roundness as felt through the abdominal walls. That condition having taken place, the soiled bedding and the garments of the patient may be changed, after she is somewhat rested. *Then* the patient should go to sleep; for rest and quietness of body and mind are great needs of the mother during the first few days, and *especially* during the first few hours. While the patient sleeps,

the nurse must be vigilant as to whether there is too great uterine hemorrhage.

As the patient should be quiet, so should those around her. It is a mistake, and the mistake is dangerous, to have a chattering of tongues, and a general jubilee over the favorable termination of labor. Let all be happy certainly, but let the happiness be of the deeper and quieter kind. Besides there should not be a single visitor admitted in less than a week; and nine days at least should the mother keep her bed *all the time*. Even a bed-pan must be used. No less than two weeks more should elapse before she engages in any employment whatever. If before her pregnancy she has had uterine displacement, still greater care is imperatively demanded. She must in that case keep her bed, and as flat as possible for three weeks at least. To the woman who feels entirely able to get up the next day after the birth of her child, the above advice may seem exacting and unnecessary. It is true that some not only can and do get up, but go to work in two or three days, but it is unsafe for them, and would be murderous for many. It is a fact that a great proportion of women do suffer from uterine disease at some period of their lives, and many during nearly all periods. The causes do not consist in the nature of woman; but in imprudence, mismanagement, infringement upon hygienic law when she is not pregnant, or when she *is*, or during her puerperal state. Hence it is needful for every woman to know something of her peculiar physical life, and to practise what she knows.

The vulva and the region of the vulva must be washed at least once every day, with warm water to which a little carbolic acid solution is to be added. The parts are to be dried after each washing, and a dry cloth applied.

The nourishment during the first few days should be of the most simple nature, such as milk, corn-starch porridge, oat-meal porridge, etc. And indeed during a month or more the food should be plain and easily digested. The above rule should not be departed from only when the patient is exhausted, or her constitution is enfeebled; in that case very nourishing, yet easily digested food, and even stimulants may be required.

If the bowels are not moved in about two days, an injection should be given. It is better if need be to administer an injection daily for a few days, lest straining may cause damage. Injections are greatly to be preferred to laxatives of any kind.

From the emptiness the patient feels after labor is completed, she sometimes does not feel the need of urinating until the bladder becomes so full that she is unable to do so. Therefore, within a few hours after the child's birth, her attention must be called to this.

2d. Now let us inquire what are the duties of the nurse in regard to the child?

The first thing to be done with the child after its birth is to take it out of the woollen blanket in which it was first wrapped and bathe it. The manner of doing this is of *importance*, since the child, unused to the air and weather, takes cold very easily. There is not a doubt but the basis of incurable disease is often laid during the process of the first bathing. In the first place then, the room must be a little more than comfortably warm, and entirely free from draught, even the little that is made by opening and shutting the door of the next room. In the second place the water should be *warm*. In the third place it is better to bathe the baby *in* the water than *with* it. When all is ready quickly smear a warm well-beaten egg all over the body. This will assist in removing from the skin the white curdy substance with which it is more or less covered. Now put the child into the warm water up to its neck quickly, so as not to expose it to the air, yet gently so as not to injure or hurt it. After carefully washing the body for not more than five minutes, the drying is to be performed thus: immediately on taking it out of the water quickly wrap it in several thicknesses of warmed flannels, and dry the child by pressure applied outside of the flannels. Then dress it speedily, handle carefully, and lay it on its right side in a warm bed.

Baby should never be washed with strong soap-suds: for it is apt to abrade the skin, and lay the foundation for some cutaneous affection.

THE UMBILICAL CORD AND THE BANDAGE.—Before the child is dressed, the nurse is to examine the navel cord, and if it bleeds, another ligature must be tied around it. Then a hole large enough for the cord to pass through is to be made in the centre of a circular piece of the softest linen of about three inches in diameter; and after smearing it with lard or mutton tallow, or, better still, cosmoline, the cord is to be passed through the hole, laid over on the left side of the belly, and the linen smoothly spread out. Over this, a soft flannel bandage, about four inches wide, is to be placed and passed around the body *loosely*. Many nurses have the most profound conviction that the abdominal bandage of the infant must be drawn tightly, for the purpose, it may be supposed for want of a better reason, of holding the little tenderling together! But God has made tight bandaging quite unnecessary. The conservative forces of nature are perfectly adequate, you may be assured, to keep children from bursting. Besides, tight bandages and tight clothing are far from harmless. Why, *feel* this soft, cartilaginous little piece of humanity with your hand, and then give your opinion as to the amount of pressure it can possibly bear without being squeezed into a form far different from that which nature gave it. *Improving* God's work, forsooth! Examine the child again after it is tensely bandaged, and fashionably dressed, and you will find it as round and as hard and unyielding as a log. Thus encased, what about the normal action of the organs within? The ends of the infant's bones are cartilaginous, and, in consequence, are very flexible, and the ribs are especially so. Hence an undue compression of the chest is a very easy matter, and, in practice, exceedingly frequent. Whatever is the compression, in the same ratio is the respiration impeded, the blood for want of oxygen not purified, the heart's action interfered with, the liver pressed upon, the normal functions of the stomach molested, the contents of the abdomen displaced, and if the compression be continued, the child will be forever deformed. Enough, one would suppose, to convince the most incorrigible, that the bandages and clothing of infants ought to be loose. Not only should they be loose in infancy, but all through childhood as

well. Is it possible to impress on the minds of parents and nurses their duty in these things, so they will see to it that their children are so dressed as to give freedom of respiration, natural freedom to the functions of all the organs, and so permit the little ones to grow into the beautiful forms of vigorous and healthy manhood and womanhood—children of nature, not of perverted art?

Now, returning to the cord, it should be examined daily; when it shrivels and naturally separates from the child, it should be taken away, and a soft compress, one-sixth of an inch thick, and made of soft linen, is to be oiled and placed over the umbilicus (navel), which will be kept in place by the bandage. As soon as the umbilicus is of a similar color as the surrounding skin, the compress will be no longer needed. If the navel ulcerates, the frequent application of a little powdered alum, or tannin, will probably be sufficient for the cure.

The Dress.—The great ideas to be kept in view relative to the manner in which the infant is to be clothed are, 1st, equable warmth over the whole body; 2d, looseness of every article. The under-garments should be made of soft flannel. No pins should be used about the child's garments. Strings should be attached for fastening every article of clothing.

The Breasts.—The breasts of the infant sometimes swell, and nurses squeeze them. This should not be done; for it produces too much irritation. The better way is to gently rub them three times a day with a mixture of glycerine and camphor.

If baby does not pass its water within about fifteen hours after its birth, lay a flannel wet with warm water and whiskey on the bowels. If that is not effectual, inform the physician.

If the child's bowels are constipated, don't give it physic, but use warm-water injections carefully, or suppositories of *real* Castile soap.

Food.—At the very beginning of the infant's life it is fashionable with many nurses, and the fashion is even more pernicious than common, to *feed* and *stuff* the helpless little thing with catnip-tea saffron-tea, or some or all other compounds within the

long range of woman's ingenuity. *None* of such mixtures are generally needed. They are not only not needed, but will, if made use of, often lay the foundation for immediate or remote disease. Nature's nourishment, and therefore the best nourishment for the infant, is the milk of its mother. As it is better for the well-being of the child to be nursed, so it is better for the well-being of the mother to nurse her child. Hence, healthy mothers have here a duty which it is their prerogative not to evade. I say healthy mothers; for if a woman has consumption, syphilis, prolonged acute disease, or if pregnancy be renewed, it is often better not to nurse her child: but the decision of this matter should, in every case, be left to the physician.

The child should be put to the breast in from three to five hours after its birth; or as soon as the mother has become somewhat rested and cooled from her labor. To wait a day or two before doing this, and to feed the child in the meantime with the slops of the nurses, is to endanger the mother and the child—the mother, from fever by suppression or caseous formation of the milk; the child, by depriving it of the peculiar and advantageous properties of the milk at this period, which nature has designed for its good. The child, it is true, cannot, during the first two or three days, get much nourishment from its mother, but in ninety-nine cases out of every hundred it can get all it needs. At this period of its existence very little nourishment is required, because the mode of nutrition is undergoing a radical change, and the capabilities of its digestive organs are very limited. Therefore, if given much, or other nourishment than that which nature gives, the child will suffer and persistently cry, as the *immediate* price of the nurse's over-officiousness. Something must be done, for nothing will sooner drive the father from the house, or the mother into tears, than the little one's suffering cries. Here it is that the irrepressible soothing-syrups have their stronghold; for the nurse knows full well that the babe is in pain, and ascribing the pain, not to the mixtures fed it, not indeed to *any cause*—her mind intent on stillness alone, she *so* naturally resorts to those cordials with which little ones are *soothed!—soothed* only to awaken in a worse condition than

before—*soothed*, often to lay the deep basis for interminable disease, in years to come—*soothed*, sometimes, to the stillness that knows no waking. A knotty state of things, it would seem, for the nurse to deal with when she sees her charge grow continually more restless and uncontrollable under her wise (?) treatment. Not so, however. She feels her unbounded ability to cope with the little fledgling! She does not need at all the advice of the physician, and would not follow any advice he might give; for has she not other compounds in the shape of food? other talismanic cordials? Thus she arrays for the battle, and the battle becomes an eternal see-saw between improper food, crying pain, decoctions, and the ranks upon ranks of soothing syrups! And the whole processes are but an enginery of torture and irrepressible retribution; but the torture is not bestowed upon the sinner where it belongs. Such is the *fashionable* management of infants! a management which, if persistently pursued, will often cause immediate or remote disease, or drag the little tender thing from its mother's arms forever; and all of these mournful results are called the unsearchable providence of the Almighty.

"The use of quieting medicines for infants, at the pleasure of nurse or mother, is simply murderous and should be punishable by law. Among those used in England and America some have been found to contain one grain of morphia to an ounce, with other opium alkaloids. Two doses have caused the death of a child aged fifteen months. Some contain half a grain, others a sixth of a grain of opium to an ounce. Powders have been known to contain three-quarters of a grain of calomel to each powder: they kill many infants."

I have dwelt thus long and thus severely on this point because I know from sufficient experience that all of it and more is deserved and demanded. But in the midst of mismanagement of all degrees, I am indeed glad to know that such unwisdom may not be applied to every nurse—that a few among the many understand that the chief business of a new-born babe is simply to *sleep* and to partake of the *nourishment* which *nature has made especially for its use.*

The office of the nurse is a commendable one. The work itself is humane, and a work of mercy; and its effects extend to ages to come. One in this profession should therefore learn her business. If she learns her business, she will follow the physician's directions, when a physician has charge of the case; at all other times she will follow well-established rules of hygiene, and never meddle with therapeutics any further than she has a *knowledge* of that science. In those rare cases in which the mother has insufficient nourishment for her child, during the first few days of its life, it matters much what is fed to it. Give it the following: from a young, healthy new-milch cow, take a quart of milk; let it stand two hours, and then carefully dip one gill of it from the top for use; to which add three gills of water, and a fourth of a teaspoonful of sugar of milk, and let the baby take a little of it warm.

THE PHYSICAL MANAGEMENT OF THE CHILD

FROM A FEW WEEKS OLD UNTIL WEANED.

Now that the mother has regained her strength, probably dismissed her nurse, and has the care of her own baby, she will soon find herself under a mother's perplexities, as well as a mother's fruitions. She will find it essential to learn self-government, and to discipline herself most carefully in her diet, disposition, conduct and all hygienic laws.

She should not decline to nurse her child unless there is sufficient physical reason; and while nursing, she must abstain from the long catalogue of unwholesome foods. The most simple living is to be adopted—*plain, simple, nourishing.*

Her blood should not be over-heated. But let it not deter her from taking daily open-air exercise during all seasons of the year, when the weather is not stormy. When the sun's rays are not too hot, let her enjoy them freely.

Encompassed by a mother's trials, it is not always an easy

matter to keep her whole nature flooded with sweetness, especially if her natural disposition is sour; and yet control of the temper *must* be uniformly maintained, for the tumult of exciting or depressing passions is not conducive in preserving the goodness of the milk upon which the child's well-being so intimately depends; it may change it into a thing as poisonous as the sting of an asp.

Briefly, a mother who nurses her child as far as in her power should be determined to obey all the physical and mental laws, that are necessary to the maintenance of health, joy and tranquillity of mind.

The milk of the mother is the only natural and proper food for infants. To it alone the child should be entirely confined during the first few months. The difficulty of rearing an infant "by hand" is very generally understood. The importance of confining it *entirely* to the breast during the first months subsequent to its birth is not so generally recognized. It is often the case that the child is given—even forced against its instinctive nature—to eat articles of food, which the powers of its stomach are totally inadequate to digest. Then its mother thinks it so strange that baby, with which she is *so* careful, should suffer from colic, irregularity of the bowels, serious disease, often ending in death!

Wet-Nurse.—If from any cause the mother cannot nurse her child, what shall be done? Give it into the hands of a wet-nurse, or "bring it up by hand"—which? Between these alternatives, the preference by all means should be a wet-nurse. In choosing a wet-nurse great care and judgment should be used, as to what manner of woman she is, and the advice of the family physician had better be asked in relation thereto.

She should in *every* way be healthy, and free from hereditary taint. Hence her family history as well as her personal history must be good.

She must not be either too young or too old. Between twenty and thirty-five are the best ages.

The nurse's child should be the same age or nearly that of the child given into her hands. Should her own child be living

and not thriving, she ought not then to be chosen; or if dead, let the cause of its death be inquired into.

The baby should not be given into the hands of a woman whose pregnancy is renewed, and it is objectionable if she menstruates.

Her disposition ought to be amiable; her temperament not too lymphatic or nervous; her character above reproach; her person, dress and surroundings scrupulously clean.

"By Hand."—Often, however, a suitable wet-nurse cannot be or is not procured; or the mother has an insufficient supply of milk, and it becomes necessary to bring up the child wholly or in part on artificial nourishment—an undertaking sufficiently perilous at best, and fearfully perilous if attempted in a hap-hazard manner. How can at least comparative safety be achieved? is therefore a question on the correct answer of which depend the health and lives of millions of the little ones. Without doubt the most suitable nourishment for an infant, after the milk of woman, is as a rule cow's or goat's milk; and in this country that of the cow is usually selected. But cow's milk differs considerably from that of woman, for it contains twice as much casein (cheese), and only two-thirds as much sugar. Hence it must undergo certain manipulation before it is suitable as nourishment for the young child. It is evidently desirable to make the milk of the cow as nearly as possible like human milk, at the different ages of mother and child. To accomplish this, a portion of the cheese must be taken *from*, the butter or cream left *in*, and sugar *added to* the milk of the cow. Now if a quantity of milk direct from the cow be strained in a vessel and let stand for a certain time, a proportion of the cheese will settle towards the bottom of the vessel, and the cream in a proportion will rise to the top. If then a portion of the milk with the cream be dipped from the top, that which is taken will of course contain less casein, while the cream is retained. Thus is accomplished the first two objects. In this form, however, the milk is more concentrated than human milk, and must be diluted more or less according to the stage of lactation. In this diluted form it is less sweet than woman's milk, and it must be sweetened. As

the sugar that nature puts into milk is not cane sugar, it must be sweetened with sugar of milk, which can be procured at drug stores.

To assist mothers prepare cow's milk as nearly as possible to breast milk I give the following table, which I know will be of great value if followed closely:

FOR A CHILD.	COW'S MILK.	Take top after standing 2 hours.	Add Water.
From 1 to 2 months old.... Making 12 gills food.	2 quarts.	4 gills.	8 gills.
From 2 to 3 months old....	2 quarts.	5 gills.	8 gills.
" 3 to 4 "	2 "	6 "	8 "
" 4 to 5 "	2 "	6½ "	7 "
" 5 to 6 "	2 "	7 "	7 "
" 7 to 8 "	3 "	8 "	5 "
" 10 to 12 "	3 "	9 "	1 "
" 12 to 15 "	3 "	10 "	1 "

Add sugar of milk, a teaspoonful to the pint; or pure glycerine the same quantity.

Eight ordinary tablespoonfuls make one gill.

How this mixture should be warmed.—The mixture as per table should be given to the child at about the temperature of its body, 99° Fahrenheit. It can be raised to this temperature without scalding the milk, by placing a vessel of it in water of the desired temperature: a thermometer should be used as a sure indicator.

How to feed the child.—The method of feeding baby is of much importance. Nature's method, *nursing*, should be similated. The nursing-bottle must consequently come into requisition, and it matters much what kind of nursing-bottle is used, for disease and death are in some of them. One kind much in favor with many mothers and nurses is constructed as follows: A long rubber tube is attached at one end to the bottle, and at the other to the mouth-piece, and a glass tube extends from near the bottom of the bottle and connects at its top with the rubber tube. I only describe this nursing-bottle to condemn it. The *danger* lurks in the rubber tube. Even when new it cannot be entirely harmless, containing as it does oxide of zinc. But the chief dan-

ger is this: when used by the infant little particles of milk adhere to the inside of the tube, and soon sour. If some of this deposit be placed under the microscope, thousands of minute organic germs are visible, many of which are loosened during the act of nursing and swallowed by the child. These germs acting upon the coats of the stomach and bowels produce diarrhœa, cholera infantum, etc. It is next to impossible to keep this rubber tube free from these germs and acid milk, either by placing it in water, or rinsing in a stream, or with the little brush sometimes sold with the bottle. But admitting the *possibility* of cleansing it, who in practice will take all the necessary trouble to do so seven or eight times a day?

A far safer bottle is one with a rubber mouth-piece which can be drawn over or taken off the mouth of the bottle at pleasure. This mouth-piece can be easily cleaned and kept clean by simply washing it with pure water and rubbing it afterwards with dry salt.

The sucking of an empty feeding-bottle, sweet teats, etc., is liable to impair the child's digestion, to cause sore mouth, or other forms of ill health, and therefore should never be allowed.

It sometimes happens that the child does not thrive on the milk mixture with which it is fed. In that case a change in the cow, as I have often seen in practice, will be usually beneficial. Occasionally, and especially in warm weather, the milk will, notwithstanding all caution, become too acid in the stomach—coagulated, indeed, as cheese-curd, and seen when the child vomits. Then of course this nutriment disagrees, for milk should only change in the stomach to a soft, pulpy substance. When it does become abnormally acid, from three to six tablespoonfuls of lime water should be added to a pint of the milk mixture, and an equal quantity of the water left out.

Lime water may be purchased at drug stores already prepared; or families may prepare it for themselves, as follows: Lime four ounces; pure water one gallon. First slake the lime with a little of the water, then mix the remaining water with the lime; let the mixture stand in a closely covered vessel for three hours, and put it, lime and all, into well-stoppered glass vessels

for use. When it is to be used, take from the clear solution, being *careful* not to mix any of the lime itself with the milk.

Lime water when needed, thus mixed with milk, is not only innocent, but very generally will make the milk mixture agree with baby, although previously it disagreed. If it does not yet agree the physician's advice had better be asked. The child may or may not need medicine; or perhaps it only needs change of nutriment; such as Liebig's infants' food.

The importance of procuring *good* milk and of avoiding giving *sour* milk to the baby cannot be overestimated. The simple hint given concerning its sourness will move the loving mother to carefulness. Its goodness depends on several conditions, some of which *every* woman does not understand. First, the cow must be healthy and not old. She must not be fed on decayed vegetables, refuse from the kitchen, sour milk, or impure water. Hay, corn, oats, grass, sound potatoes, carrots, bran, and sweet milk are all proper foods for cows. Second, cleanliness should be used in milking, a clean stable, a clean cow, clean hands, a clean pail, and a clean atmosphere where the cow is milked. Third, the milk should after straining be kept in a clean dish, and in the *purest* of atmosphere. Fourth, when preparing for baby's use, pure water must be used, and the nursing-bottle and tip be kept scrupulously clean and sweet, and when not in use in a basin of cold, clean water to which a little lime water is added.

How often shall the mother nurse her baby or give it nourishment from the feeding-bottle?

No absolutely fixed rule can be given as to how often an infant ought to be nursed or fed. Mothers too often take it for granted that a child is hungry if it cries. Accepting its crying as the monitor from which there can be no appeal, they give, and too often force the little creature that cannot say, "I am not hungry," to take the breast or bottle. The consequence is a morbid appetite, indigestion and all the resultant evils. Another practice is to keep the child at the breast all night, to which the same objections exist, with the additional one, that the child is thus made to breathe a confined, impure atmosphere.

At each nursing the child should have all it wants, and it

should be nursed or fed at stated periods. During the first two months every hour and a half perhaps. The next two months every two hours is sufficiently often to give the babe nourishment. After four months old, less and less often as the age advances. The intervals between the periods of giving nourishment, while corresponding in a general way to the above, must, after all, vary according to the *natural*, not the *artificial* wants of the child; and these wants are in the youngest child made known by signs which, if observed, are too plain to be misunderstood.

Infants from an early age ought often to be allowed moderately cold water. They are often *thirsty* when mothers think them hungry.

The errors and the confused manner of feeding infants have grown inexcusably deep and wide among mothers and nurses of all classes; the evils thereof have been sufficiently harmful to children to arouse every one who loves her child to the danger of such confusion heaped on confusion.

There are essential details of nourishment after the child needs something different, or some addition to breast milk or cow's milk. First let me premise that the mother should, after her puerperal state is passed, always, and every time, have her personal supervision of her baby's food. If she insists on this, and if she is acquainted with the physiology and hygiene of infancy, she will allow, during the first few months, no food whatever but breast milk, if she has a sufficiency; and if she does not have a sufficiency, *then* no other except the milk mixture, etc., before named in these pages. While she will know that the "hearty food" idea prevails to a certain extent among all classes, she will be equally aware of the fallacy of the idea. Hearty food with that erroneous class means meat, and potatoes, and beans, and cheese, and pan-cakes, and pies, and indeed everything which parents eat. Does there live a mother whose child looks delicate, or pale, or sickly, who has not been repeatedly asked, by some over-officious, yet well-meaning soul, this question: "Why don't you give your child something to eat?" "Hearty food is what it needs—you are

starving it." "I let my children eat what they want, and they are *pictures* of health."

The mother of the delicate child has taken the most tender care of it, given that which she had supposed was proper food. With her soul full of anxiety and love, she has done what she thought was best for her darling, and now she knows not what to do. I will tell her *just* what to do. If she has a doubt as to the correctness of what she has done, let her consult her physician about the matter.

No one need doubt the sincerity of those ladies who would be advisers. They may indeed be tinctured a little with that common fault called egotism, yet they usually intend for good every word they say. Their words, backed by their robust children, carry a seeming weight with them, and *only* a *seeming* weight, for their conclusions are drawn, not from any laws of physiology or hygiene, but alone from the natural and seemingly invincible toughness of their own children's stomachs. It must be remembered that children vastly differ in their natural powers of digestion. While some can stand, for a time, the most reckless feeding, others can hardly bear the most harmless nutriment, and to give them the so-called "hearty foods," is unconscious infanticide.

Advising mothers must be informed that a very large percentage of the children that are prematurely fed on "hearty food," and are "pictures of health," die from diseases of the stomach, of the bowels, and of the brain. No providence of God is the cause, madam, but often the "eating of what they want"—the pernicious power behind foods they should not eat sends them to their little graves. Mothers should trace the free eating babes from their cradles along the road of life, and they will for themselves behold the fearful thinning of their ranks along the way; and of those who live to manhood and to womanhood, they may count the proportion who suffer from dyspepsia, and kindred diseases, and learn what has caused all this. Are disease and death the *natural* sequence of a healthy, robust, picture of health infancy? The mothers of the delicate children, trembling in the presence of "hearty food" mothers, may ask them,

what *teeth* are for? If made for the purpose of mastication, and if the youngest infant needs solid food, why does not nature provide these tiny forms of humanity with teeth? Saliva also is essential to the proper digestion of starchy foods. The salivary glands, during the first few months, secrete saliva but scantily. Why is this, if such foods are calculated for the first months of infancy?

Both the physiology of digestion and experience indubitably teach, that the entire nourishment during the first five months of infancy should be *milk* from the breasts of woman; or in cases where that cannot be had, the entire nourishment during the same time should be the milk mixture as before indicated, excepting certain rare cases.

Cow's milk diluted with water, without or with the addition of lime water and sweetened with glycerine or sugar of milk, is not *always* a sufficient substitute for the milk of the mother. When therefore the child that is fed with it does not thrive, the mother must look about for something which will remedy the evil; and she must, of course, generally select from the cereal foods. But some of the cereal foods consist chiefly of starch, and starch supports the *heat* of the body to a much greater degree than it does the *tissues*. During the first four to six months of infant life, natural diastase is not found in the saliva in sufficient quantity to digest starchy foods.

It is therefore necessary to select those in which the proportion of gluten or nitrogeneous element is greatest, and starch is least. Barley-meal and oat-meal are those foods; for they not only contain more gluten and less starch than does wheat and other cereal foods, but the starch they do contain is more easily digested. Hence when milk fails to give adequate support and to sustain good health, let the mother choose either oat-meal, or barley-meal, according to the condition of the child. Where there is a tendency to constipation, oat-meal is to be preferred; and barley-meal when the tendency is the reverse. Let the mother make the barley-meal herself by grinding the *whole* grain in the coffee-mill.

A teaspoonful of either is to be boiled in half a pint of water,

with a little table salt, for half an hour; then after straining through a linen cloth, the strained water is to be mixed with boiled cow's milk in the same proportion, according to age of the child, as given in the table, and sweetened the same. Often the addition of a little gum arabic water is advantageous.

If the nourishments already named do not agree with the child, then some of the prepared "infants' foods" may be tried. But much caution must here be used, for according to recent analysis, far the greater number of Europe's twenty varieties, and America's forty varieties of so called "infants' foods," which are so strenuously advertised, are entirely unfit for infants or any one else. Mellin's Infants' Food, and Hawley's Liebig's Food, if well preserved, are, however, nearly faultless.

Just after the child is five months old, if healthy, it may begin to have, in addition to its previous nourishment, small quantities of oat-meal porridge, plain animal broths, rice flour thoroughly cooked in water and made into a porridge with milk.

Solid food should not be allowed before the process of dentition has made some progress. Before that period solid food cannot be masticated nor properly digested. But a vigorous child of about eight months old, if it has *not* teeth, may be allowed, in addition to the nutriments already mentioned, wheaten bread (not new) and milk; nice soda crackers in the animal broths; and raw or soft cooked eggs. If the child *has* teeth, carefully feel the way along by permitting nice bread and butter, mealy potatoes, boiled or baked with the skins on, and finely pulverized with a fork, not pressed with a knife. The potatoes may be eaten with salt and butter, or milk or cream gravy.

When the child is about ten months old, begin moderately with the light tender meats, oysters, fresh fish *entirely* free from bones. These, with all the foods allowed at earlier periods, make up a sufficiently copious dietary table.

It is not expected that parents will *exactly* follow the order of foods and the ages of the child as given. I have, however, given the *general rule*, to be deviated from according to the healthiness, rapidity of growth, and robustness of the child. Mothers must exercise their powers of observation, learn to read

the true condition of their children, and the effects which the different articles of food have upon them. Remember *always* that illness will not supervene without an adequate cause, and that the most frequent cause of sickness among infants is improper feeding.

WEANING BABY.—If the child has teeth, the proper time to wean it is at the end of twelve months. At the longest, every baby ought to be weaned as soon as it is sixteen months old, even if it has no teeth. To nurse longer is generally not a little detrimental to the health of both mother and child. The safest, and therefore the best seasons of the year in which to wean children are in the early spring or late in the autumn.

Sometimes a woman cannot endure the drain upon her which a nursing child causes, more than four or five months, and occasionally less, without lastingly endangering her constitution or her reason. In that case the child ought to be weaned, however young it is. If, therefore, the mother who is yet nursing her babe, begins to experience a sinking sensation in the region of the stomach, loss of appetite, palpitation of the heart, giddiness, exhaustion of the whole system, lowness of spirits, or such symptoms as these; and if, according to her physician's opinion, these symptoms arise from nursing her child—then duty demands that she heed the warning, and at once cease nursing her baby.

It sometimes happens that the nursing babe does not thrive, when the mother cannot understand why, as she thinks herself a healthy woman. In such cases a skilled physician should be consulted, and he will probably find whether the cause of the unthriftiness is in the child, or in some constitutional peculiarity of the mother which badly affects the milk. He will advise accordingly.

BABY'S CRIB should be so open as to admit pure air freely. It should be out of all cold draughts, and out of the direct rays of the sun. A bright light shining directly into the eyes irritates them, and may cause inflammation of the eyes or brain. During the first few weeks the little one should lie on its side—never on its back.

It is better not to have rockers on the crib; but if the mother considers rockers indispensable, let them at least be put so as not to rock the child from side to side. It is an unnatural motion which, if not as bad as jolting the baby on the lap (so fashionable with parents), is sufficiently bad to sometimes give a tendency to diseases of the brain. The brains of infants are tender, impressible and susceptible to disease. Many parents treat them as if they were indestructible.

The child, its clothing, its bedding, its surroundings, should be kept scrupulously clean; conforming with the best known laws of health.

THE PHYSICAL MANAGEMENT OF CHILDREN AFTER WEANING.

1. How much shall a boy or girl eat?—The words and the conduct of parents answer this question in different ways. Some have the conviction in which no doubt ever enters, that the more food their children take the better. The mother will say to John, if he is not well, "John, can you not eat some of this, or some of that? you will be sick if you don't eat more;" when the probability is that he has undigested food in his stomach, and his stomach needs rest; or else from some other cause he is far better off without food. Or, if the boy is well, his mother will insist upon his eating more, for fear he will be hungry before the time for another meal. And the father chimes in, especially if the boy is old enough to perform manual labor, "Yes, John, you cannot work on such a dinner as that."

On the other hand, a large class of parents has a no less strong impression that children eat too much, and will say, "George, you have had enough—you are making a pig of yourself—you must not have any more."

Some authors, and a few sanitarians also, are divided, and occupy the two opposite grounds—a part of them instructing us and our children to eat all we wish; the others insisting that we must leave the table when more or less hungry.

It is self-evident both of these opinions cannot be right; and the well-being of rising generations cries for a correct answer,

for the position that is wrong will, when practised, have an evil tendency in the physical development of children.

The instinctive laws of animal life are undoubtedly to be trusted as the best hygienic laws. Starting from that basis, what answer will result? Hunger is an internal sensation—a silent yet imperious demand for food arising from the wants of the system. What does the satisfaction of this hunger mean but that those wants are supplied? Both the cry of the system for food and its sensation of satisfaction are natural processes. Hence one naturally eats when hungry—that is, when the body needs nutrition; and one naturally stops eating when hunger is satisfied—that is, when the body needs no more nutrition; and it is obvious *that* is the time to stop eating. The answer evolved is therefore this: that the young and old may—no, not may, but *should* eat as long as they are hungry. This is the rule. But, like other rules, it is subject to two or three exceptions.

Exception 1st. One may eat so rapidly as to swallow more than the system needs before there is time for the impression of satisfaction to be made upon the sensorium or the necessary nervous ganglia. Therefore children when very young should be taught to partake of their food very slowly and to masticate it thoroughly.

Exception 2d. In certain diseases, and especially in some diseases of the stomach, the expressions of hunger and its satisfaction themselves become perverted or morbid, in sympathy with the organic pathological condition. Thus it sometimes happens in disease that we must insist upon the patient's taking nourishment when he has no relish or disposition to take it, and at other times to refuse him food when his appetite is voracious.

Exception 3d—exists in persons who in childhood have been held under the most rigorous *abstemious* discipline. Having been withheld from long-wanted desires, they sometimes rush, when released from parental restraint, into extreme extravagance and voracity.

Hunger should not be confounded with appetite. They do indeed represent different degrees of the same want; but hunger is imperious in its demands, while appetite may be provoked—

excited by delicious food. Consequently children should be instructed, and adults admonished to continue to eat *only* while actually hungry—*never* to continue after hunger ceases simply because a certain dish is delicious to the taste.

2. WHAT SHALL CHILDREN AND YOUTH EAT?—If children may safely be left under the guidance of hunger as to the *amount* of food they eat, reasoning from similar premises it would seem that the *quality* of food may as safely be left to the demands of their nature. In actual practice can the quality of food be thus left? Taking into consideration the various viands and numberless compounds that have for a century loaded American tables, and the perverted tastes created therefrom, the answer to this question must be, *no*. Had all those tables for past generations been laden with foods which are in harmony with the best sanitary laws, then the answer might truly be, *yes*. The automatic action of babes when they put everything into their mouths that go into their hands cannot be considered an evidence against the answer. For it cannot a moment be supposed that they have a liking, an appetite for everything vile that they stuff into their mouths. Is it not rather an effort, a struggle of the animalism in them for existence?—an existence, indeed, which they of themselves are entirely incapable of sustaining. Neither, I think, is the habit which many *youth* have of eating wild, unripe grapes, crab apples, etc., an argument against the answer. Who can for a moment entertain the notion that *such* is a *natural* appetite or taste? It is self-evident that the human organic nature does not demand foods which are harmful and may kill the eater. Why, then, do people eat and often relish harmful foods? What is the appetite if not a perverted appetite, or else really no appetite at all? How came the appetite perverted? Undoubtedly from a continued feeding on improper dishes, which the cunning hand of the cook has so compounded as to make them agreeable to the taste; or from the continued eating of compounds, *not* at first palatable, which bungling cooks forever *force* upon children; or from the irrepressible nibblings of example, as when boys eat wild grapes because they see others do so. We have every reason to believe that these inadaptations between man

and his food will continue as long as American tables are laden with dishes in all non-conformity to hygienic cookery. The appetite cannot be perverted? Go ask of the millions that chew tobacco. Did they like it when they began? Did their organic nature demand it? Go ask of millions of drunkards who are slaves to drink, tyrants to their families, and who awaken the echoes in their fiendish nightly carousals. Is all this the natural response to the voice of organic health?

I can, under the actual state of things, come to no other conclusion than this: that we must learn to discriminate between wholesome and unwholesome foods, and then teach our children what we ourselves do know.

Attention to three points will aid parents in making this discrimination. 1. What is *really natural* for children to eat? 2. The actual and relative components of the different foods. 3. What kinds of food has experience taught us to be wholesome and what unwholesome for children and youths?

A few examples as to simple foods—not artful compounds—will show us how to use these evidences. Children, of course, want to eat what they relish; and we want to determine whether the relish *is* or *is not natural.* For instance, is the relish for sweets a natural or a perverted taste in children? And how will the use of them conform with the evidences indicated? Now, since this relish with them is almost universal and commanding, and since the universality and the urgency of it seems instinctive in children from a very early age, and since sweets serve a purpose in the human economy, and since experience has found them, in certain quantities, to be wholesome, we may fairly suppose that sweets are suitable food for children. Nor can the popular, or any other objections, confute this conclusion. If sugar causes worms in children, there is no evidence of it. That the sweets are not very nourishing in the sense of muscle-making food is readily conceded. They play an important part in the vital processes for all that. Sugar, like fat, is chiefly oxidized in the organism, which results in the evolution of heat; or in other words, the sweets, like the fatty compounds, are combustible matters, *fuel*, which, in the process of oxidation, sustains the

warmth of the human body—quite an important part towards the sustenance of life, is it not? But starchy foods as well sustain the warmth of the body. Why, then, are not potatoes to be preferred to sugar, as they also contain some muscle-making nourishment? The potato is a suitable food certainly, and so is sugar. Sugar is better adapted for the purpose it serves in the organism than starchy foods, since the starch must, before serving this purpose, undergo the change from starch to sugar. The sweets, in proper quantities, are thus to be preferred for the purpose they serve to starch alone, because they can be utilized by the organism with less expenditure of vital energy.

Have not children a natural liking for rich, sweet cakes? Why, therefore, is not this a suitable food for them? Simply this: a rich, sweet cake is so compounded as to make its digestion difficult, and with some children impossible. Why, then, do they like it? For the *sweet* that is in it. Take that out and it loses its superlative deliciousness.

Milk.—Infants like milk, and would undoubtedly continue to do so through childhood and age were parents so thoughtful as to continue to feed them with it, instead of inappropriate foods. This we know is the natural, and therefore the best nourishment for infancy; and the same qualities which make it the best for infants also make it wholesome for persons of every age, viz.: it contains every ingredient which is necessary to nourish every organ and tissue of the human body, and very nearly in the proper proportions for every age.

3. Do Children require less or more Nutritious Diet than Adults?—Many parents entertain and act upon the opinion that children require comparatively unnutritious food. Is that opinion well founded? is a question of great practical importance, and to enable us to answer it at all satisfactorily we must first inquire, What object does the food we eat serve in our physical organism, or for what purpose are we hungry? This question has been answered; but to refresh the memory, let the answer be here repeated with a slight variation. Every action of the body, every thought, and every functional activity of organic life, is attended by wear and disintegration of tissue. The

loss of animal heat by radiation is also as continual. It is obvious that the tissue and the heat thus wasted must be renewed, or starvation, coldness and death will be the inevitable consequences. This renewal comes from the food we eat. Our foods, therefore, must be both nourishing and heat-producing. But all foods are not sufficiently nourishing for all tissues of the body, neither are they all sufficiently heat-making. Thus, sugar and the fats produce heat, but not muscle to any great extent. Foods, rich in the phosphates, etc., nourish the bones and brain, but not essentially the muscles in due proportion. Milk, oatmeal, eggs, and especially lean meat, are highly nitrogeneous and muscle-making foods. We need, then, all of these classes of nutriment in proper proportions (see Food, etc.), and children need them as well as adults, for after arriving at a certain age they are no less active, either physically or mentally, than adults. Their bodies are not only undergoing the *same kinds* of waste, but as much waste, and this ought to be renewed by nouishment to the same perfect extent; consequently they must be given foods which contain the same constituents that adults get. Further, the bodies of children are not only undergoing a waste of material corresponding to that of adults, but they are rapidly growing. Provision, in the way of food, therefore, must be made, not only for the renewal of wasted tissue, but also for the growth of the child. We must come to the conclusion that children require either a *more* nutritious diet than adults, or *as* nutritious, and more in *quantity* in proportion to the weight of the body; or else *less* nutritious and still greater quantity.

1. Experience has definitely taught sanitarians that an exclusive concentrated diet is bad, both for the young and old, because the stomach demands a certain normal fulness to perform its functions properly and soon cloys on rich, concentrated food.

2. If the requisite nourishment is supplied by an immoderate quantity of *un*nutritious food, the digestive and vital powers are overtaxed and become exhausted by overwork.

3. Hence it appears that the "happy medium" here, as in many other cases, is correct. That is, children should eat food

of about equal nutritive value with that which is most suitable for adults, and eat a little more than adults in proportion to the weight of the person in order to support the growth. Experience and the relative constituents of the human body prove that a mixture of vegetable and animal foods in proper proportions is best for adults. (See Food for Adults.) But vegetarians will ask, Why is meat required at all? and why will not nitrogeneous vegetable foods do as well? The two chief reasons are as follows: 1. If we eat sufficient vegetable food to supply the requisite quantity of nitrogen which the human system demands we very generally will consume too much of some of the other food constituents, as the fatty or the starchy foods. 2. Lean meat is not only a concentrated nitrogeneous food, but it is *muscle* already prepared for us, while other kinds of food in reaching the same state must in the digestive and assimilative system undergo that transformation at the expense of the digestive and vital powers.

As a further corroboration of the fact that an exclusive bulky diet is not as suitable as a mixture, I trust the reader will further consider the subject, as it relates to men, horses, and other animals—a field which may not be traversed here. I will only add this: it has been conclusively found that men and animals are all the hardier, healthier, and more active for being fed on a mixture of coarse food, and concentrated nitrogeneous food. It is well known among horsemen that a horse cannot endure as great amount of work when fed on grass alone as he can when fed on hay and oats, or grass and oats. Indeed, when double duty is required of a horse, it is the practice with some to feed beans, rather than oats, because they are still richer in nitrogeneous or muscle-making material.

It has also been found that children who are habitually and almost exclusively fed on foods defective in richness are more often dyspeptic than those properly fed; as calves are liable to indigestion and unthriftiness that are fed on skim milk.

The following *general* rule may safely be given: Give children and youths a palatable mixture of food which gives both a sufficient nourishment to all the organs and sufficient bulk to fill the stomach *moderately full*.

And do not forget prudent changes in diet. Both are conducive to a healthy digestion, rapid growth, and long life.

Remember that children, to sustain their growth, require more food than adults in proportion to the weight of the body, which gives more work proportionately for their digestive organs, and is a greater strain upon their vital forces; while their vital forces are less than those of grown-up persons. It is evident, therefore, that a child cannot, with safety, take the same freedom in eating that a healthy adult can. In other words, there ought to be a nicer discrimination in the choice of foods with children than with adults.

As a corroborative evidence that a nicer discrimination as to the selection of children's food is demanded, we have only to recall to memory the appalling mortality among children, a great proportion of which is caused by diseases of the digestive organs, and such chiefly have their origin in improper eating. The improper food not digesting, causes fermentation, irritation and diseases which very often the potency of medicine and the skill of the doctor cannot cure. How often for our little cherubs, our "human hearts, like muffled drums, are beating funeral marches to the grave." Dear mother, God does not cause you such anguish, the depth and the keenness of which neither pen nor tongue can tell; He does not bruise your hearts so; He delights not in this slaughter of the infants. This terrible suffering and mortality proceeds from violation of some unchangeable law of child nature; for which parents are more or less amenable.

It is notorious how few *men* and *women* have really good digestions. It is equally notorious how many suffer the torments of impaired digestion. No parent need be astonished to be told that the bases of those torments are mostly laid in infancy or childhood, by the great besetting sin of American mothers. For if the functions of the digestive organs are preserved in a normal and sound condition through infancy, childhood and youth, adult age will generally maintain what has been thus preserved.

How then are parents to prevent food diseases, and food

mortality? Let them feed their children properly. To accomplish this, the great idea to be kept in view is to give the digestive organs as little labor to do as is practically consistent with sufficient nourishment, and all the wants of the body. Consequently in the choice of foods, such should be selected as are easy of digestion, and their effects on the stomach and bowels carefully watched. (See Table in Food for Adults.) The nitrogeneous and carbonaceous foods must be given in appropriate proportions. (See Food for Adults.)

In making the selections, it should be remembered that the summer after the child's weaning is full of danger, and therefore the greatest vigilance and care must be taken.

Certain fruits adapted to the child's age are innocent, but mothers should see that they are perfectly ripe, sound, and not stale. I have seen some of the most dangerous diseases brought on by peaches which were gathered for shipping when unripe, and after softening, not ripening, were eaten by children.

Children are generally very fond of candies, nuts, raisins, pastry, etc., etc. These and such as these, when freely permitted, are messengers of immediate or remote disease, and of death; they are usually too freely allowed.

A child needs not only nourishing and easily digested food, but that which it likes; and it will like *suitable* foods unless the appetite is perverted by faulty feeding.

After the child is weaned, the way must be carefully felt along. Let the same foods be continued that were used before weaning, and others gradually added, as meat, eggs, potatoes, other vegetables, ripe cooked or raw fruits, bread, butter, milk, etc. Change these at different meals, so there may not be a monotonous sameness. Let the supper be early, light and simple; as bread and milk.

Remember that the child is both an incessant worker and grower; and for the renewal of the worked-away tissues, and the creation of new tissue, let him have some milk between meals if he wants it. Tea or coffee *never*, either *at or between* meals. Children in health need no stimulant of any kind. Their proper drinks are *water* and *milk*.

Slowness of eating, thoroughness of mastication, and a continuance until hunger ceases; easily digested food, simplicity in its cookery, and watchfulness as to its effects; food so selected and proportioned as to properly nourish all parts of the body, and to sustain the normal warmth,—*these* are children's indispensable necessities, but necessities which needs some knowledge and care on the part of parents.

The good sense and maternal love of women ought to be a sufficient incentive to induce *every one* to study the physical nature of their children, and practically observe the dire consequences of departing from sanitary laws which, if not learned by themselves, have been learned from scientific study and experimental observations of others. But mothers love their darlings with unbounded indulgence, and the indulgence kills them. Their own observation *practically* teaches them nothing. The words of warning from sanitarians only move the air about their ears for a moment, and all is over; while the dear helpless ones, in free, but dark and solemn processions, are marching along the roads that lead to suffering and the grave.

CLOTHING FOR CHILDREN.—Boys and girls cannot be hardened to insufficient clothing without a corresponding physical deficiency somewhere. Those whose constitutions are strong enough to survive, survive either at the expense of feeble vital powers, or at the expense of want of growth. The smallness of men and many animals in the frigid zones corroborates this. Thus the Laplanders and the Esquimaux are low in stature; and the Terra del Fuegians, who grow up in a nude state, are said to be so stunted and hideous, that Darwin exclaimed "one can hardly make one's self believe they are fellow-creatures." The chief reason of this lowness of stature may perhaps be found in the fact that the powers of their digestive systems are mostly expended in assimilating those foods which go to sustain the *heat* of the body, and that there is little power left to assimilate material which make up the *tissues* of the body. It is, therefore, a cold and a fruitless task to undertake to make a hardy, well-formed, fair-sized, healthy people by any freezing process whatever.

It is evident that man should be warmly clad. And the question here arises, Do children need to be *more* or *less* warmly clothed than adults? We should decidedly know the scientific answer to this question, since the physical weal of our children more or less depends upon the view we take of it, and the manner in which we carry out that view. It is a fact that in regard to it a confusion and an uncertainty prevails among many, while it is the positive opinion of others that children should be thinly clad to toughen them, and hence they dress them scantily. Even those who would dress their children comfortably, often thoughtlessly put nearly all on the body and hips, leaving the arms, and perhaps the legs and the neck bare, or at most with but one or two thicknesses, even in the coldest winter weather; this is especially so with girls.

A child's body, as compared to that of an adult, has a greater surface in proportion to its weight. Therefore the loss of heat by radiation is greater in proportion to the weight of the body. According to good authority, the amount of carbonic acid excreted by a child is, in proportion to his weight, nearly double to that excreted by an adult. That is, the actual amount of carbonic acid manufactured by a growing girl weighing sixty pounds is about the same as that formed by a grown woman weighing one hundred and twenty pounds. Now recollect that the quantity of carbonic acid excreted is an index of the quantity of heat generated in the body, and, consequently, of the heat the body loses. It follows, therefore, that even when children are as warmly clad as are adults, they must, in proportion to the weight of the person, eat almost double the heat-generating food necessary for a grown person; that when children are more thinly dressed than adults, the heat-producing foods must be increased about in proportion to the deficiency of the clothing. But a child should not be obliged to eat an excess of carbonaceous foods, because extra labor is thus imposed upon the digestive organs, leaving just so much less of digestive and vital force for the assimilation of the requisite flesh and bone-making food; and the consequence is the growth of the child is checked, or, if the growth continues, it is at the great expense of unsound-

ness of health and of low vitality. Hence it is obvious that children need to be *more* warmly clothed than adults. The amount of clothing should be nicely adapted to the atmospheric temperature, and be just sufficient and no more to keep the child warm, when he eats all classes of food in hygienic proportions, as should be eaten by adults: not forgetting to so cover the whole body as to maintain an *equable* warmth. But parents, whose children are insufficiently clothed, often assert: "My children never complain of the cold, even when I *do*." Perhaps they do not. They become so accustomed to the sensation of coldness that they may be obtuse, or even almost unconscious of the condition: it is largely the nature of children not to take thought about their physical sensations unless the suffering is intense. To take it for granted that they really are not cold because they do not complain, is very often taking for granted that a great mistake is truth. To test the true condition, let the mother, if she herself is warm, touch the different parts of her own person to corresponding parts of the child.

So, too, among the most intelligent, the senseless caprices of fashion inflict deformities, low vitality, disease, and premature death upon thousands of the fair girls of our land, in that the dress is not only deficient where it especially ought to be sufficient, but it is made in a manner to restrain activity, and so nice as to debar the wearer from a free exercise she so much needs, lest the dress be injured.

We draw a few practical conclusions.

1. During the first months of infancy the garments are of sufficient length that nothing more is required for the feet than short woollen socks. But now that short dresses take the place of the long robes, soft woollen stockings as long as they can conveniently be worn must be put on, and shoes, which in winter should be warmly lined. In addition to these, woollen leggings should be had for out-door wear during cold weather. The stockings at this and every other period of life may be held in place by elastic strips buttoned to the tops of the stockings and to garments above. No one, either young or old, should wear garters around the legs. It is strange how little thought,

and still less action, is given by mothers to the clothing of children's legs, and especially so if the children are girls. A man cannot endure the winter's cold without dressing his legs twice as warmly. And yet do you take it for granted that your little tender child has stronger powers of endurance than a robust man? You may be assured that you are endangering the health and the life of the darling that is so very dear to you.

2. When in the open air the head should be covered, and in cold weather the neck and face, though not too warmly, and remember always not to obstruct the breathing by too heavy muffling.

The clothing over the whole person should be sufficiently loose, sufficiently and equably warm. Hence the chest, arms, legs, and everywhere should be covered to a most comfortable warmness. The back only of the waist of the clothing should be snug to support the shoulders; the front should be very roomy, to give space for the rapid growth of the chest. The shoulders should be made to support the entire weight of the clothing.

The mother who so far ignores the behest of fashion as to exclude low necks and short sleeves from the wardrobe of her child must expect to meet with much direct or indirect impertinence in the shape of word-thrusts about "horrid! and dreadful! and grotesque! and making the child look like an old grandmother." A very few words will give a sufficient answer. There can be no reason whatever why a little, tender baby should not be kept comfortably warm, as well as an "old grandmother," and that *clothes* are of equal necessity to both. Is the gratification of any notion of appearance *everything*? comfort and health and life nothing? The round contour of the chubby arms of a sweet little child are truly not without charms; and yet would not the mother prefer a baby with exuberant health, permitting those charms to nestle the while beneath the folds of warm apparel? Or would she *really prefer* to expose the little creature to disease, or even death, as the price of the display, and then ascribe all to inscrutable Providence?

3. The younger the child, the warmer it should be dressed, and the greater the care in protecting it against atmospheric changes by varying and adapting the amount of clothing to those changes. For obvious reasons every garment ought to be fastened with pieces of tape, ribbon, and loops—never with pins.

4. Flannels are indispensable for the under-garments, because of the equable warmth they give, making the child less susceptible to the ill influences of the sudden changes of temperature. The cloth with which the underwear is made should be thick and very warm for the colder seasons of the year, and thin for the warm weather.

5. Every article of clothing worn through the day should be changed for that which is lighter and still looser when the child retires at night.

I want thoroughly to impress and reimpress this fact upon the minds of mothers: that comparatively few children can be really toughened to insufficient clothing. Those children of the attics and the streets, which poverty clothes deficiently and in rags, are commonly looked upon as healthy and hardy, and able to shiver under the cold, naked sky with impunity, and be tossed by the tempests unharmed. It is true that a few of them do grow up so strong that want may starve them, and the storm's fury lash them in vain; but more of them are enfeebled and prepared for early disease, and a still greater proportion succumb under their calamities, and because they are little "coves" they go to their young graves almost unnoticed and unmourned.

On the other hand, there *is* such a thing as clothing children *too* warmly, and making hot-house plants of them. They, too, yield to early disease, and die for want of reactive powers.

When nurses and mothers shall become familiar with the laws of health, when their ideal shall correspond to the demands of nature, then, also, the costumes which our children shall wear will be as tasteful as now, and the world will get a more beautiful, a more intellectual, a stronger, and a healthier race of men and women. Then, too, there will be fewer little

graves planted in the gardens of the dead; fewer Rachels shall weep because their children are not.

Bathing Children.—The subject of bathing has been treated of in another chapter. A few points as to the adaptation of baths to children of all ages will only be noticed here.

When we consider the functions of the skin, and its relations to the whole body, the necessity of frequent ablutions becomes manifest. Since the vitality—the resiliency of the system is less strong in the child than in the adult, the manner of performing the ablutions *after the first*, requires some consideration.

As with the infant, so with the child, not during the first months only, but during the first years, bathing by the immersion of the whole body up to the neck is to be preferred; because if properly performed, the exposure to the cold and to colds is less by this mode than by any other. To perform it properly, the following conditions are requisite: 1. The room must be warm and free from cold draughts. 2. The water must be warm, and for infants decidedly warm. Some children, it is true, will endure the shock, and even thrive under cold daily washings. Not so, however, with a large majority of children, for their systems have not enough elasticity to react from the depressing effects of cold baths. It must not be forgotten that a child's vitality is feeble, and that the power of resistance is proportionately feeble. *Safety* lies in *warm* water for infants—warm or *tepid* water for older children. 3. After the child is undressed it should be placed into the water quickly. 4. Infants should not be allowed to remain in the water more than two or three minutes; and older children, not more than five minutes. 5. Infants, when taken out of the water, should be immediately wrapped in a woollen blanket and dried by pressure and friction on the outside of the blanket, and then dressed quickly. Older children may be quickly wiped, and rubbed with a dry towel. 6. Exercise is beneficial immediately after each bath; the kind and amount of which being adapted to the age and strength of the child.

Another mode of bathing, not so good, is to wash the child from a basin with the hand. If performed in that way, a small

portion of the body, as the arm, should be bathed quickly with the hand and dried with a towel with considerable gentle but rapid friction. Then another part of the child is to be served in the same manner, and so on until all is completed.

All the objects of the bath are attained by the maintenance of cleanliness. To bathe a child oftener than cleanliness of the skin demands, is not beneficial, but harmful to health. Daily dry friction of the body with a healthy hand is beneficial. A general bath once every day is quite another thing. For all purposes, three times a week is sufficient for a child of any age, unless you wish to scrub out all the vitality. Each bathing should include the head, as well as the rest of the body. For this purpose, and in the interest of the health, the hair should be kept short. Long, luxuriant hair on the head of a child is generally accompanied by a pale complexion, weak vitality, and a greater liability to diseases of the brain.

AIR—LIGHT—SUNSHINE.—These subjects have already received attention, and no notice would again be called to them but for this: that many parents do, in practice, totally ignore the fact that pure air, light and sunshine have any good qualities whatever for children. Yet it is the fact that a free supply of pure air is the first want of the new-born babe, and that the same want continues unabated during its whole future life; and that light and sunshine are concomitants of no mean value. Who could so think or dream, if either foolish or intelligent mothers, so carefully excluding their children from these great boons, were the teachers?

Is it entirely impossible that those who have the care of children can be penetrated by the thought, that an impure atmosphere is often productive of illness, or that it lays the foundation of an early grave? Or, when it does not directly kill, that the confinement of a child in an unclean, unventilated, close room causes impure blood, indigestion, sickly appearance, predisposing it to the train of dangerous diseases of the lungs, bowels, brain, other organs, and to a feeble life, destitute of energy? And that a continual shutting up of a child in the cleanest and the most perfectly ventilated house causes the same evils in a modified

form? That it is, therefore, of no small consequence that mothers see their children have access to the open air as much of the time as the weather will allow, or at least several hours daily, clothed in adaptation to the temperature of the weather? That when their play must be in the house, one of the largest and best ventilated rooms should be the nursery; and that it be kept clean, and free from the smoke of tobacco, of stoves, of lamps, and from all the gases and odors, and from dampness?

A caution will be in place here to those who use kerosene for lights. Lamps should never be left to burn with the wicks turned down, for the gas arises through the wick more rapidly than the small flame can consume it, and escapes and diffuses through the atmosphere of the apartment to the injury of the inmates, curtains, wall-paper, etc.

If mothers will believe that I am writing for a better purpose than simply to fill the pages of this book, I will tell them, and tell them truly, that it is wise, and every way commendable, to commence when baby is a few weeks old, taking it daily—excepting on inclement days—into the open air sufficiently and *suitably* clothed. But we cannot too promptly rebuke the practice which is so prevalent, of covering the *entire face* as well as the head with a thick shawl or hood when the child is out-of-doors, or of enclosing the cradle with a curtain, or the face with bed-blankets, or other thick covering, when the child is in the cradle or bed, as these are not suitably clothing the child. While baby is sleeping, *nothing* should be suspended around the cradle, and nothing put over the face. When in the open air, no covering for the face is required if the weather is warm; and if cold, nothing more than a double veil. If the temperature be too severe, let the child stay in the house.

The power of resisting both heat and cold is less in infants than in children; less in children than in youth; in youth than in older people. Parents should keep this in mind, and protect and shield the little ones accordingly. Such protection will shield them, too, from many of the ills of childhood.

Pure air, light, sunshine—*all*-important, from infancy to age.

Important, and *decidedly beneficial, even for girls!* Sombrous, perpetual shade, and its companion—indoor-life, are not more conducive to a healthy infancy, well-developed childhood and youth, stalwart manhood, and peerless womanhood, than to the vigorous and normal growth of plants. Humanity everywhere and at every age needs the air in its native purity, and the sunlight—subdued when too intense—which so freely descends from splendid heavens.

Is your home blessed with a little darling whose life is more dear to you than your own? Are you freely, yet prudently giving it the benefits, not a few, that flow from its embraces with the open air? Will you, after it begins to walk, even if it is a girl, let the child you love so well have free access to the out-door air in all suitable weather and proper hours? Will you let the child play, skip, and sniff the pure breezes of heaven as the lambs do? and, unconfined, dig in the bosom of the warm earth? Let it shout as free as the birds sing? So shall sparkling joy and perfect health meet together and embrace each other.

EXERCISE AND THE SCHOOL.—The benefits arising from exercise have already been somewhat considered. The benefits are many which accrue from pure air and judicious exercise. Great is their power, especially if aided by proper posture everywhere, proper desks at school, to preserve erectness of figure, the *natural* contour of the chest, and our sons and daughters from those dragging or deadly diseases so often contracted at home and in the school-room. I trust in studying these things together we may be mutually convinced that the matter of muscular development demands our earnest and active consideration. There can be no denial, that this matter is often very much neglected at home, and no less often at school. It is in its relation to the school that we have now to do.

There cannot be much said in praise of that stern and somewhat fashionable discipline of the schools which ties pupils to the seats or hard benches, for six hours daily, graced only with two short and one longer relaxation, as if each were a statue of a young Hercules or Diana, instead of a pliant child, made of flesh

and blood. It is opposed to every law of human nature. *Little* children *cannot* thus keep *perfectly* still unless restrained by fear, or some other force which teachers have no right to apply. Older boys and girls *ought* not to keep perfectly still for a long time together. The former need *frequent* freedom of motion, and oft repeated activity in the open air. The latter, the same activities less often, and yet at stated intervals. Change of posture should be frequently allowed. The sense of fatigue with which children so often return from school is frequently the result of continued and unnatural inactivity. The teachers of every school ought to be awake to these things. Intellectual advancement is not all, and should not be permitted at the expense of endangering life or health. Let physical development and mental culture go hand-in-hand. But that cannot be through the stupidity of corporal inactivity. Every human being should be a perfect animal, as well as an intellectual man. Then let teachers and parents nurture the animal as assiduously as they do, in the higher sense, the man.

At school the system of music combined with calisthenics ought everywhere to be regularly practised. But a true physical training demands more than this. Above *all*, children need natural, spontaneous exercise. Calisthenics of the schools become monotonous and dull—free, spontaneous play, never. It is a mistake to suppose that if exercise is only taken, it matters little whether it is pleasurable or not. Happiness is one of the very best of health-producers. And girls as well as boys should not be denied—no, they should be *encouraged*—to enter *freely* the happiness inherent in refined sportive plays, and be dressed so that freedom of motion is possible. For parents to deny their daughters this privilege borders very much on false refinement; for teachers to do so is not their prerogative.

Sufficient sleep and a proper amount of play are both essential to the physical development of a child; the latter, almost as essential as the former, and to most children almost as natural. Some indeed are so indefatigable that they over-play, and require restraint: a few need urging into activity.

As play is natural to children so is mental activity. They



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are eager to learn, unless they have been jaded by incessant school-drill; or *withered* by the stale dryness of the instruction or instructors. And as over-play seems natural with some, a disposition for excessive intellectual application is the fault with others. This brings us to a few of the mischiefs of excessive mental application.

During the last five decades, civilized nations in many directions have made rapid advances in sanitation. It is now becoming a question of deep interest to many observers whether what has been gained in certain directions has not been lost in others. Business men, to compete successfully with the educated and sagacious of this day, must put their energies to the severest strain. They must lay their plans at night when they ought to be sound asleep; or on Sundays, when they ought to worship God instead of mammon, and work out those plans on week-days. Business, stocks, dividends, *success*, form the gigantic passion which rules them. It is nothing strange that their vitality runs low, that their constitutions are to their bases shaken, and that the evils they thus work in themselves their children inherit by hereditary descent. The children in their turn are placed in preparatory schools; then in college, where they are passed and *pressed* through a curriculum still more complicated than that which, when school-boys, their fathers passed through. Compelled thus to give intense and prolonged intellectual application, ruinous consequences often follow. It is true some who had robust health in the beginning maintain robust health to the end: even a few whose constitutions were impaired when they began hold their own remarkably well: others pass through to suffer all their days from ill health; while still others break down altogether in the midst of the campaign, or die with the battle-cloak around them, the merciless school-drill sounding from their tongues as they go. Feebleness, paleness, low spirits from nervous prostration, general ill health, physical deformity, or death itself is a large price to pay for an *extra* education.

This picture is not overdrawn. Those who have taken the time to observe have seen just such disastrous results. Those

who have attended school can not only very readily understand the reason of this undermining of health, but are not at all amazed that it is so. Where I attended school some of us not being quick to learn were obliged to study twelve hours a day, including recitations. To help us sustain that amount of study we had to sleep eight hours in the twenty-four, which left four hours for meals, exercise, etc. But the youth who spends twelve hours a day in mental labor has not much disposition, force, or energy left for exercise. All this long-drawn-out mental regimen never has made us very wise nor very robust.

Now, it is pertinent to ask ourselves where all this high-pressure school-system is leading us. The men of to-day who have passed through the schools and come out with enfeebled constitutions, marry, have children more or less puny, who in their turn pass through similar cramming, breaking-down processes; and of them those who survive come out of school, marry, and go into business, which puts all their energies to the severest tension, and *they* have children; and so the cycles go round. What of succeeding generations? Is there no danger that our boasted civilized nations, in spite of sanitary advancement in other directions, will degenerate? Go down, instead of *up!*

We would not under-rate that which cannot well be *over*-rated —a good education. Yet the prevailing tendency to an unreasonable (because unhealthful) *forced* system of intellectual culture cannot well be too severely condemned. A steady and not unnatural unfolding of the intellect, which shall beat in harmonious time to physical development, equal and mutual growth and culture of body and mind—*this* makes the perfect man. But if in education the hard-pressed enginery must be the rule for generations to come, then youthful wrecks, more numerous and complete, will be ground out in the mills of the schools.

There are sufficient causes for these wrecks. The vital resiliency inherent in the body at any given time is limited. There cannot be had out of a youth any more physical or mental force than there is in him, and as much *should* not be had. *Every* one, young or old, should have *reserved* powers. It is to be remembered that every mental as well as every corporal

action is attended with organic waste, and the loss of substance must be renewed by brain nutriment—that is, by food. But the powers of digestion are also limited; hence, if all the digestive force is engaged in manufacturing nutriment for the brain, which is rapidly wasting by intensity of long-sustained study, it follows that other parts of the body are not nourished. That is the *extreme* of mental activity, which, if it could be, or if it were continued for a long time, would result in death from a total arrest of the digestive process, or its entire expenditure on the brain. But the ideal extreme is an index to what a less yet too prolonged and intense study would do. It is an overtaxation of the digestive organs in their faithful efforts to supply nourishment apace with the wants of the fast wasting brain and nervous system, and the consequent deficiency of nutriment—a neglect or powerlessness, if you will, of the digestive organs to bestow the requisite attention on the general physical organization, followed by the necessary consequences: dyspepsia, general ill-health, organic degeneration, nervous prostration, in the proportion that the brain is overworked, and with the vital hardiness of the person. Nor is there generally much gained, in point of knowledge, by this high-pressure stuffing system of education. Since the appropriating and present capacity of reason and memory are limited, as are all other forces of the system, it follows that if the processes of reasoning are too long continued the mind becomes bewildered; or if facts are given to the memory more rapidly than they can be assimilated, they never find a home in the storehouse of the mind.

We say, then, that a profound education is commendable, but not of so much worth as to be purchased at the price that is often paid for it.

It is, happily, a subject of close and earnest study with many schoolmen how a broad, deep, and finished education may be attained other than at the expense of physical degeneration; or how a staunch corporal vessel, sound in every part, can be made up and loaded at the same time with an expanded and best intellectual cargo, with which the vessel can sail without danger of shipwreck. Shortening the school hours and the study

hours has been contemplated, and in a few cases put into practice. With young children, it seems to me, this plan would be practical and available. The great objection to it for youth, young men and young women, is in relation to the manner in which they would be likely to spend the remaining of the twenty-four hours. Four hours of school and study, nine hours for the bed, and two hours for meals, would leave nine hours for recreation and recuperation. The young, if given nine hours daily to employ as they are disposed, would, many of them, grow reckless, form bad habits, and go to ruin; for the average young person would not be disposed to spend so much time at legitimate play, while a few of the boys and many of the girls would loll about the house to the great detriment of health and of energy.

Nature is so generous in her bestowment of animal spirits to the young that, as a rule, they will be employed in some manner; and the great question is, How can they safely be employed while they are being educated? Or, How can the mental and physical being be at once educated as a whole, and each educated to the good of the other? Starting from the self-evident proposition that judicious exercise of the mind and of the body is conducive to the health and strength of each, the idea of Industrial Schools, where part of the time is devoted to study and part to work, is under advisement by many, and a few of such schools have been established. But here the labor part, if not wisely directed, is apt to be a tedious task. Yet if tact be used on the part of instructors and parents, it seems not unlikely that a combination of study, instruction and practice in the industries, alternated with play, might be practically carried out so that the pupils, rested by the changes, would make even more rapid progress in the studies proper, learn something of the industries, learn the increased power and certainty that knowledge gives to labor; and at the same time preserve a sound mind in a sound body. I trust this mode of educating the whole man and the whole woman may be thoroughly and many times tested under different plans, for it seems to me that complete success awaits us somewhere in its range.

Under any plan, however, no child less than fifteen years of age, who studies well at school, should be allowed to study at home. If not studious at school, it alters the case. But no child, however unstudious, should be required to bend over his books at home to the neglect of a proper amount of exercise in the open air.

Teachers under every plan ought to give far more attention to the health of their pupils than they usually do, and so should school directors and school-house builders. A school-building requires even more care in warmth, light, ventilation, cleanliness, and all hygienic laws than does a private residence; for many are crowded together, and the crowd, especially in common schools, is promiscuous.

Mothers who send their children to school, should send them with instructions concerning their behavior in relation to health. Parents carelessly delegate all to teachers; teachers are thoughtless, the children reckless, and what wonder, then, that our sons and daughters are so often ill, and so often grow into a feeble, sickly life?

It may be depended upon that impure air, exclusion from the light of the sun, improper notions and carelessness in regard to food, the hardening theory in regard to clothing, insufficient exercise, excessive mental application—*all* are, with our children, massive retarders of progressive physical development, robust health, sturdy vitality.

Having inherited good constitutions and sound health, children will lose neither without adequate cause. If such children are sick, or if they die, there is generally no inexorable fate about it, unless the ignorance or carelessness on the part of parents, or of others who have the care of children be called inexorable fate. Ignorance, carelessness, and the gratification of children's foibles through mistaken tenderness, besides all the special causes which have herein been named, mean feebleness, illness, mortality. Wisdom and vigilance, combined with practical action—the power to say no, combined with the inclination to say yes; inflexibility, combined with the tenderness of affection, are the needs of the mother, of the father, and of teachers.

Here is a youth who, from his birth, has been properly fed, properly clothed, judiciously bathed, allowed pure water, and in the house, pure air, and out-door freedom under proper limitation. In education he is as far advanced as the average youth of his age, but *wisely* advanced. A healthy constitution was inherited, a healthy constitution is maintained. His muscles, how firm and well developed; his chest, how full and broad; his body, how erect and elastic; his cheeks, a little browned, but how plump, and how they glow with the rich flowing blood; and the sparkling battery of his eyes flashes the pleasant story of soundness of mind and soundness of body all surcharged and overflowing with spirits that are young, buoyant and strong.

Here is another youth who also inherited a good constitution. At the very first he was fed on the teas and the all-healing (?) cordials which imprudent nurses gave. He was tightly bandaged and improperly clothed. And all the way along indulgent parents have given him plenty of candies, and sweet-meats, and pastry, and indeed all kinds of food unsuitable for a child. He has been closely confined to the house to save him from taking cold, and the blinds have been kept closed, lest the carpets might fade! has experienced from the age of four all the beatitudes (?) of physical stillness and mental activity of competitive school-life. The carpets have not faded! They are as nice as new, but what about this naturally bright and healthy child? He has been *starved* for the want of pure air, the invigorating influences of the sun, physical exercise, and suitable food, the loving mother the while ready to give her all and her life if that would infuse health into her declining son, and stem the tide of impending death. This boy is of the same age as the other, but what a contrast! Enough to draw tears from the solid rock. His arms and legs so slender, his chest so narrow, his shoulders already beginning to stoop, for he has been in the *educating* mills! his face so pale and sallow, his mild eyes so languid as to tell of no vigor or animation in his body, or music in his soul—all admonish us more forcibly than can words how the constitutions of the thousands of our sons and daughters are broken up and destroyed, and how other thousands are wafted to

"That undiscovered country from whose bourne
No traveller returns."

SIGNS OF DISEASE IN CHILDREN,

AND HOW TO INTERPRET THEM.

To assist the mother in the removal of the little ailments of her children, which will be the next subject, it is necessary that she have some way by which she can recognize such ailments and distinguish them from the graver diseases. It is a common occurrence, when called to see a little child, for the mother to say, "Doctor, I do not know as my child needs a physician, but it is not well, and yet I cannot tell how ill it is: for one cannot understand the feelings of the little ones that are unable to express them." But they *do* express them: not in words, but in a language which is as explicit. You need to learn to interpret that language. To assist mothers to do this is the present purpose.

You know that after Columbus had discovered America he was told that any one might have done that. Thereupon he asked those at table if they could make an egg stand on its smaller end? After all had tried and failed, the great discoverer said, "It is easy enough after one knows how," and then took the egg, struck it upon the table hard enough to break its shell, and there it securely stood on its broadened base. So it is not difficult to interpret the feelings of the youngest infant by the physical signs after one knows how.

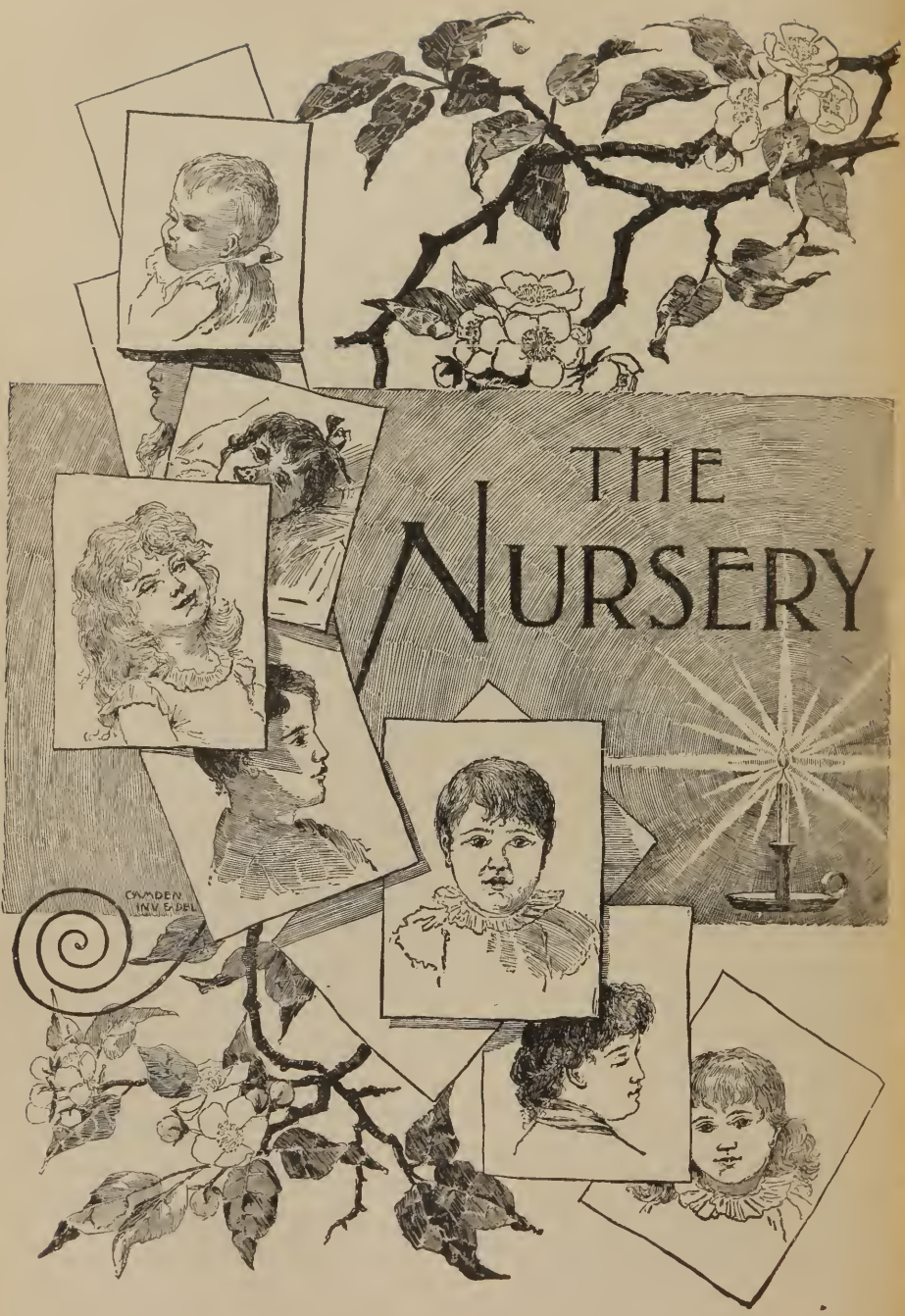
Often, even in dark, stormy nights, I have been called to see for the first time a child when there was no need whatever for a physician, because the ailment was so slight that if the mother could have read the symptoms and known the remedies, which every parent ought to learn, she might safely have been her child's doctor. I have also been often called when a child had for several days been dangerously ill, and sometimes when it was actually dying. It is evident, therefore, that every parent, and especially every mother, ought to learn to observe every expression of countenance and eyes; every motion of the body and every part of the body; the appearance of all the secretions of

the body ; every cry ; and whether these phenomena mean health or disease ; and if disease, the character of it. Then, if the ailment is slight, both the doctor and his fee may be saved ; if the illness is serious, perhaps the physician may save the child. In cases of doubt, the safe way, and therefore the best, is to consult the family physician.

Besides, a physician cannot make a fair analysis of an infant's illness unless he knows what are the symptoms. The mother in her constant attendance upon the little patient, if she is a practised and intelligent observer, will notice symptoms which are not present during the physician's short visit. Thus, she may not only be able to distinguish the comparative and actual gravity of the child's sickness for herself, but assist the medical attendant in distinguishing it.

As a preparative to the study of appearances which denote disease one must become familiar with the phenomena which denote health, as it is by comparing the deviation from the normal condition that an abnormal condition may be definitely understood.

Signs of Health.—The legs of a healthy child are round, plump, and elastic to the touch ; the skin soft, and moderately cool ; the eyes bright, sparkling, and quick in their movements ; the abdomen is soft, rather rotund, and gentle pressure upon it is pleasantly borne. The countenance of a very young infant is placid, without expression ; but after the age of a few months it is sprightly and quick to respond to surrounding persons and things ; the lips are rosy and supple ; the tongue moist, but is usually a little coated with a whitish fur. The sleep is profound, and when the little cherub awakens, if not hungry, it is usually sprightly and active ; the laziness comes afterwards. Such is the picture of perfect health. We cannot expect, however, to find every child in this most desirable condition. It may depart from perfection in several little particulars and not be ill. Not so if it departs for the worse from *its* normal condition, for no such departure should be considered unimportant, as the approach of serious disease may be the meaning. Most of the serious diseases of infancy and childhood, if detected, may be


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controlled in the incipient stages if promptly and properly treated; but if overlooked, and let alone only for a few hours, some of them may thwart the skill of the most skillful. Seeming trivial symptoms, as a slight indigestion or organic irritation, may be reflected, either slowly or quickly, to the head and produce convulsions, congestion of the brain or its membranes.

SIGNS OF ILL-HEALTH.—Let us now consider some of the signs which mean aberration from health.

1. *The Breath.*—The breath of a healthy child is often very sweet, as every affectionate mother can testify. Its odor sometimes, however, is slightly acid; but no infant that is well has a decidedly sour breath; if it is so, it usually denotes indigestion, and presages diarrhœa or colic. The clothing is, of course, too clean to smell of anything but sweetness. A fetid breath may mean indigestion, ulcerations of the nose, sore mouth, diseased gums, scarlatina, or diphtheria; and when such a breath is detected, its cause should at once be found. Here let me advise the mother to examine the throat every time baby is not well. In this age of diphtheria and scarlet fever caution and vigilance are things of wisdom.

2. *Vomiting and the Stool.*—The impetuous infant in its voracity often nurses more than the system needs or the stomach can digest, and the surplus is vomited. Nature, with a cunning hand, has in the child placed the stomach in a position to facilitate this process. If baby in this way ejects nutriment, and is in every appearance well and thriving, no attention need be given it other than care that it does not overload the stomach. But if not well, or if it does not thrive, evil is impending, as indigestion, disease of the stomach, bowels, or brain. The onset of scarlet fever is often attended by vomiting. Violent and frequent vomiting, with discharges from the bowels of a yellowish or colorless fluid, and rapid sinking of the little patient, constitute cholera infantum. When vomiting is a premonition of affections of the brain it is attended by other symptoms, which will be mentioned by-and-by.

Diarrhœa.—Infants normally have more frequent passages from the bowels than do older persons. In health, the first dis-

charges after birth are green or black; after that they have a soft, whitish or greenish appearance for a time, and during the remainder of childhood the color is yellowish or light brown, with more consistence.

Diarrhœa may be produced by improper food, irritation or congestion of the bowels, an excess of acid in the stomach, irritation of teething, etc.; if not remedied it may prove fatal when prolonged or profuse.

The chief appearances of the stools as they occur in diarrhœa are:

1. Sour, frothy discharges, of a green color, denote indigestion, and generally from improper feeding. 2. When watery, nearly colorless and without odor, cholera infantum is present or impending. 3. Stools of a *deep* green color denote indigestion, acidity, and frequently serious disease of the stomach or bowels, and often both, as gastro-intestinal inflammation. 4. Discharges of slime or blood, without the presence of fæces proper, mean dysentery. 5. Clay-colored stools generally denote affection of the liver with deficiency of bile. 6. The passage of foods entirely unchanged is an indication of the total suspension of the powers of digestion, and generally an excessive irritability of the stomach and intestinal canal.

3. *The Urine.*—When an excess of pale urine is voided, indigestion is generally present. But a long continuance of the same may mean diabetes, and a physician should be consulted.

Pain, or difficulty in urinating, may arise from affections of the kidneys, bladder, urethra, irritation in the rectum, or derangement of the digestive organs.

4. *The Skin.*—When the skin is dry and hot, or moist and hot, fever is usually present. Fever may exist, also, when the skin is cool and bloodless.

In active inflammation of the brain or its membranes the head is hot and face flushed, while the feet and legs may be of the natural temperature, or cold. In passive affections of the brain, denoting debility, the head and face may be also cold.

In abdominal inflammations the bowels are usually hot, even if all the rest of the body is cold.

In indigestion, irritations of the bowels or lungs, the hands are often dry and burning.

In certain diseases of the lungs, and especially in pneumonia, there is often a circumscribed redness of one or both cheeks; also in disturbances of the digestive organs. In consumption, the redness is more diffused, giving the *rosy* cheeks, as if the patient were blossoming for heaven.

Intense *blueness* of the skin is present in a certain congenital malformation of the heart.

A decided yellowness of the skin is usually indicative of some affection of the liver or irritation of the bowels.

Many of the cutaneous eruptions are only symptoms of derangements of the digestive organs.

5. *The Tongue and Mouth.*—In health the infant's tongue is moist, but generally more or less covered along its middle with a whitish mucus, and the gums have a bright, healthy-looking redness.

Small white points of curdy matter on the tongue or mouth denote derangement of the stomach or bowels; or they may be caused by impure air or filth.

Intense redness and dryness of the tongue and mouth are present in inflammation of the mouth, and coexist with inflammation of the alimentary canal.

A pale, flabby tongue means great prostration of the vital powers and imminent peril.

Swelling of the tongue sometimes occurs in the course of several diseases, and is generally an unfavorable symptom.

Great dryness of the mouth and tongue, with an insatiable thirst, occurring in the course of any disease, is not favorable.

6. *Expressions of the Face and Eyes.*—The countenance and eyes are wonderfully expressive of the feelings of children.

Paleness of the face generally accompanies diseases of the stomach and bowels. If yellow, as well as pale, some trouble of the functions of the liver may be looked for.

Great paleness of the face, alternating from time to time with flushing, usually indicates either prostration and an effort of nature at reaction, or presages convulsions or inflammation of

the membranes of the brain. But when acute inflammation about the head is seated, the face is usually flushed and hot continually.

The skin over the forehead is often tense and shining in protracted cases of cholera infantum.

In cases of low, *dangerous* prostration from any cause, and especially from bowel affections, the face is pale, the cheeks cold, eyelids partly closed, eyes sunken in their sockets, the pupils contracted. And if to these symptoms are added conjunctival effusion of blood (blood-shot eyes), a covering of a mucous film on the eye-balls and a dark circle around the eyes, death is impending.

A sudden corrugation of the lower part of the forehead, attended by a short cry, a quick movement of the body, means sharp, sudden pain. And if the knees at the same time are drawn up, or the body straightened out, the pain is probably in the bowels or stomach.

A continued contraction of the brows generally means pain in the head. A drawing up of the upper lip, abdominal pain.

The approach of convulsions is usually marked by a turning up of the eye-balls, a staring, fixed position of the eyes, a drawing of the upper lip over the gums, twitching of certain muscles of the face, alternate flushing and paleness of the face. *All* of these premonitory symptoms may not be expected in any one case; but if one or more of them is present, the condition of the child's gums, digestive organs and nervous system, must immediately be looked after in order to prevent the coming evil.

Alternate contraction and dilatation of the nostrils and open mouth show great difficulty of respiration.

A swelling of the nose and upper lip is sometimes caused by a chronic irritation of the alimentary canal.

An habitual administration of opiates, whether or not in the form of the popular soothing and teething syrups, often causes yellow skin, emaciation of the body, which causes the skin to wrinkle and put on the appearance of old age, dryness of the lips, dulness of the eyes, and a general condition of ill health.

The pupil is usually contracted at the commencement of inflammation of the brain, and dilated at a later stage.

Persistent strabismus (cross or squint eye) appearing in the course of any disease is usually indicative of the invasion of brain disease, and is always a very grave symptom.

7. *Unnatural Respiration* is present, in a greater or less degree, in all the affections of the lungs and air-passages, and often in those of the brain. If in any of these diseases the difficulty increases, the patient is growing worse. But in pleurisy the danger is not in proportion to the derangement of respiration, for the derangement in a great degree is caused by the *pain* that respiration produces.

A lifting up of the shoulders, great exertion of the muscles of the neck, rapid, alternate dilatations and contractions of the nostrils during respiration, indicate great gravity of the disease, and an unfavorable termination may be feared.

Respiration is rapid and more or less laborious in most of the fevers.

8. *Cough* does not *always* mean disease of some one of the respiratory organs. It sometimes, by a reflex action, accompanies affections of the stomach, liver, and brain.

Pleurisy is attended by a short, hacking cough, with little or no expectoration; and so of the first stage of consumption. Bronchitis and pneumonia by more or less of continued cough with expectoration. The cough is usually hoarse in colds. Intermittent, spasmodic crowing in croup.

9. *Hiccough.*—A baby frequently hiccoughs when in health, or when the digestion is slightly affected. But when this symptom occurs in the course of a dangerous illness it is usually unfavorable.

10. *Sneezing* may result from local irritation of the nasal membrane, as dust, etc., or it may be a symptom of a cold or of some trouble in the digestive apparatus.

11. *Sleep.*—In perfect health the sleep of a child is profound and very little disturbed. The eyelids are never *tightly* closed, and often a little open; the eye-balls turned slightly upward; the respiration regular and tranquil, though sometimes incom-

plete, so that the child takes from time to time a deep inspiration to make up for the loss. When a child is *apparently* well, if it is troubled in its sleep or suddenly awakens crying, it is *not* well, but has some gastric or intestinal irritation from improper feeding. The remedy is obvious.

Twitchings of the eyelids or mouth, or the grinding of the teeth when the baby is sleeping, are not by any means always the indication of worms, but are generally indicative of more or less derangement of the stomach or bowels, and *sometimes* of the brain.

Sudden starts during sleep often indicate that disease is threatening. Sudden startings from sleep, accompanied by screams, often show the presence of abdominal irritations, or threatened convulsions, or inflammation of the membranes of the brain.

12. *The Cry.*—Crying is the natural *vocal* language of infants. In health, and unspoiled, they generally make use of that language only to express their wants. Not exactly so, however, in the new-born babe. Then vigorous crying is an indubitable sign of health, and, while it fills its lungs with air and establishes respiration, an essential and natural want, the cry is probably produced by the external novel impressions, to which it has never before been subjected.

Besides the imperious cry for its wants, a sick baby will cry on account of pain, and a persistent or violent crying, outside of anger, is usually the result of suffering. Hard crying should be speedily quieted, for whatever be the cause which produces it, its effects, when long continued, are injurious, and may produce convulsions.

Shrill and piercing screams are not only an indication of acute pain, but often of acute disease, as of the brain or its membranes.

The cry of croup has a peculiar hoarse, ringing, or squealing sound.

Habitual fretfulness, when it has not been produced by mismanagement, does not often exist in a healthy child, and if it *does* exist in your child, let the cause be investigated, for serious disease may be impending.

Painful and grave diseases of the alimentary canal are often attended by a low, moaning cry at each expiration, and whatever disease it attends, it is not a good symptom.

13. *The Gestures.*—After the intellect has so far advanced as to make it capable of perception, the baby during health is active, playful, observant; and as if trying to be social it will coo, chirp, smile and use all the eloquence of which baby language is capable. When illness approaches, however, all is changed to inactivity, listlessness, silence.

Abdominal pain will cause a child to draw up its knees, bend the body forward or throw it back.

A child will keep a limb still, or else move it in jerks if the limb is in pain. When the head is the seat of pain, the little one as a rule will frequently apply its hand to the head, or to the ear, if the pain is there.

Frequent bending of the head backwards, or rolling it from side to side, commonly indicates disease of the brain or of the membranes of the brain.

Picking or rubbing the nose generally means irritation of the stomach or bowels, and sometimes it is an indication of worms.

The forcible flexions of the fingers or toes are symptoms of approaching convulsions. Forcible contractions of any of the other voluntary muscles often mean brain trouble, or irritation situated in some other organ, which is reflected to the nervous centres.

Convulsions are occasionally preceded by a rigid extension of the arms or legs.

Sometimes during irritation of the stomach or bowels, the child has peculiar but very slight convulsions of the muscles of the face, which give to the face the appearance of smiling. This may be succeeded by severe convulsions. In the course of the irritation, and especially if dentition is at the same time in progress, one of the child's legs sometimes becomes partially paralyzed. The strength of the limb is, however, quite generally restored in time, though the paralysis *may* prove a grave thing.

A staggering gait, the want of ability to stand securely, and an inability to control the limbs perfectly, generally indicate serious disease of the brain or spine.

When a child nurses voraciously for a moment, and then suddenly and impatiently stops, and repeats, and re-repeats the nursing and the stopping, it is generally suffering from bronchitis or pneumonia. If rolling of the head accompanies the same movements, convulsions are often foreshown. But sometimes these motions are indicative of sore mouth or throat.

The mother is not, of course, expected to remember all the phenomena named denoting illness. She should, however, learn the appearances of a child in health; to observe any departure therefrom, and then she will be able quickly to refer to the signs of disease as herein mentioned, to distinguish the ailment, and perhaps save her darling from serious illness or death.

LITTLE AILMENTS OF CHILDREN,

AND HOW TO CURE THEM.

The advice here given is to aid parents in the recognition and cure of the little ailments to which children are so subject, and the gravity of which is not so great as to require the skill of the physician.

If the mother from the first has caused her child to conform closely to hygienic law, in feeding, clothing, bathing, purity of air, etc., then it is more than probable that the little being is plump and healthy as a child should be. But even then those little ailments may sometimes come for want of knowledge in some little thing, some oversight, or from some unpreventable cause. In that case the child's powers of resisting sickness will be all the stronger to assist the mother in her efforts to restore health. On the other hand, if from the nurse's early and unwise officiousness, or the mother's ignorance, or continual inadvertences, the child has become puny, or if sickly from causes which existed in heredity, then the small illnesses will not only be more frequent, but often far more intractable. In *any* case early symptoms of disease should be discerned and remedied.

1. TEETHING.—Mothers generally suppose that the process of teething is the cause of almost all the ills of early childhood, and that worms have to answer for the rest. There can be no doubt but that these do often produce more or less disturbance in young organizations, and perhaps much disturbance in sickly or delicate children. But it should be borne in mind that teething is nature's own process, which a healthy child, if properly managed, is fully able to meet successfully. Hence in any given case, if this process is actually doing any great damage, there is nearly always some other cause outside of it that has prepared the child for, or made it susceptible of, being badly influenced by a naturally innocent process, with a pernicious result.

A disturbance of this kind in its *simplest* form is attended by more or less swelling of the gums, a disposition to bite everything it can get into its mouth, and some fretfulness. To assist nature by giving the little one suitable things to bite, as an ivory or rubber ring, is usually a sufficient remedy.

Sometimes the symptoms are more serious. The gums are not only tense and swollen, but the child is thirsty and feverish. It will nurse voraciously perhaps, but from thirst rather than from hunger.

Treatment.—If the above symptoms proceed from dentition alone, they may usually be quickly removed by giving a warm water and salt injection—two gills of warm water, with half a level teaspoonful of salt, a warm foot-bath, and applications to the gums of a mixture of powdered borax, gum arabic and honey. Sometimes lancing the gums gives decided relief. This should not, however, be done by the mother, unless they are really tense and swollen.

If by these means the symptoms are not speedily removed, a physician should be called, for dangerous disease may be stealing on.

2. WORMS.—Many children do really have them, but it is very questionable in my mind whether they often produce very serious symptoms. They may co-exist with intestinal irritation, or indeed with any other ailment, but are seldom the *cause* of the ailment.

Symptoms.—The child that is troubled with worms is likely to have itching of the nose, irregularity of the bowels, and capriciousness of the appetite. But since irritations of the stomach or bowels and other affections are often attended by the same symptoms, the diagnosis for worms, unless they are *seen*, is generally uncertain.

Treatment.—If a child is known to have worms, it is desirable to get rid of them. Pin worms are effectually expelled by injections of quassia-wood tea used warm. Take of quassia-wood, two drachms; boiling water, half a pint; mix. Let stand in a covered vessel for two hours, and strain. Give, according to age of child, from one-half to two tablespoonfuls as an injection once a day as long as worms come away.

For the large, round worms, Santonine is both safe and efficient. Dose for a child six years old is half a grain rubbed up with an equal quantity of sugar of milk, and the dose repeated twice a day for two or three days, if needed that long. For younger children the dose must be diminished, and increased for older children. The bowels should be moved rather freely every day while using this medicine.

In order to aid parents in the adjustment of the dose to the different ages of children, I will give the following rule, the adult age being the standpoint:

For children under 13 years, add 12 to the age of the child, and then divide by the age; thus if the child be 3 years old, add 12 to 3=15÷3=5; that is, the child of 3 will need $\frac{1}{5}$ as large a dose as an adult. Or, to put it in another form, if the child is 6 years old, add 12 to the 6, making 18; divide the 18 by 6, the age of the child, which will be 3, and last divide the dose for an adult by the 3, and we have the dose for a child at the age of 6; thus if the dose for an adult is 9 drops, the dose for a child at 6 will be $\frac{1}{3}$ of 9, or 3 drops. Hence hereafter I will give doses for the adult, and the reader can make the estimates as above.

3. INDIGESTION is a prolific mother of many ills of infancy and childhood, and it occurs with unnecessary frequency.

It often happens that a previously plump and healthy child gradually loses its plumpness, becomes restless, sometimes fe-

verish, and the bowels irregular. There are no symptoms of pulmonary or bronchial affection, as cough, shortness of breath, etc.; neither are there symptoms of severe bowel affection. Now if added to the above appearance, the child's breath is sour, or if it vomits hard, curdy milk or other undigested foods, or if particles of caseine or other undigested substances appear in the stools, the case is certainly one of indigestion, and probably that is *all* it is, and the illness has been caused by over-feeding, improper food, or by some other error diet-ward.

Most of the gastric and intestinal affections of children, such as diarrhœa, dysentery, colic, have their first cause in indigestion, and faults of diet are to blame for it.

Treatment.—Mothers, facing the great mortality from these causes, I am sure, will rid themselves of the notion that teething, or any other unavoidable cause, gives parentage to all the ills of childhood; and believe, as is true, that a vast majority of illnesses are avoidable, and among all indigestion stands prominently.

If indigestion has not been avoided, and if the child is already afflicted with it, the first thing to do in the way of treatment is to review what you have done and where you have erred. If the child has been overfed, lessen the quantity; if too frequently fed, let there be a longer interval between its meals; if fed with improper food, correct this fault. And *more* than these, for the *greatest* care possible must be used in the diet (see this subject previously). If the child is young, starchy foods, such as corn-starch, potatoes, arrowroot, etc., should be discarded. Oat-meal and barley, as compared with the above-named foods, contain but a small amount of starch, are both very nutritious and wholesome, and prepared with milk, are excellent foods for children. Oat-meal, however, is quite laxative, which, while it is especially adapted to cases of constipation, makes it unsuitable in diarrhœa. In the latter condition barley is much to be preferred.

In cases of indigestion, whether diarrhœa is or is not present, I have often found good results from the use of Mellin's Infants' Food and Hawley's Liebig's Food for Infants.

Sometimes raw, lean beef, with all the "gristle" taken out and the meat chopped very finely, pounded to a pulp, and then seasoned with a little salt and pepper, will be found to agree well. If the child does not relish it quite raw a little soda-cracker may be pounded in with the meat; and after being pressed out into flat cakes, let it be placed for a minute or two in a hot frying-pan.

Beef tea and the extract of beef are often agreeable to the weak stomach of a child. But if the raw meat, beef tea, or extract causes diarrhœa, it must be discontinued.

Well-beaten raw egg, mixed with milk, sweetened with a little pure glycerine, to which a few drops of port wine or brandy is added, makes a nourishing and stimulating food—very useful when stimulants are needed.

The strictest attention should be given to clothing, bathing, and pure air. The child should not only be warmly dressed, but woollen under-garments are indispensable. Baths should be given as in health; salt added to the warm water is beneficial. Let the child be taken into the open air daily, when the weather is suitable, and moved gently about.

In the indigestion of children and adults I have found dry and gentle rubbing of the bowels and body with the hand of a healthy person a most beneficial thing. This should be repeated before nourishment at least three times every day.

In the early stages of indigestion the mother may safely administer some simple medicines, but she should not depend upon herself too long.

If the complaint is attended by diarrhœa, and the bowels contain too much acid, as is the case if the stools are green, pulverized prepared chalk may be given every one, two, three, six, or eight hours, according to the urgency of the case. This will neutralize the acid, and very likely cure the diarrhœa.

The dose for an adult is about a level teaspoonful. Hence, according to the rule given, a level teaspoonful will make thirteen doses for a child of one year of age. It can be mixed with thirteen teaspoonfuls of water, and a teaspoonful of the mixture will be a dose. Stir well from the bottom before using.

If there appear grains of undigested caseine or other food in the stools, lime-water added to baby's milk—one part to five or eight of milk—is excellent, commencing with the weaker. Lime-water may be advantageously given so often, I will again give the recipe for its preparation: take lime, four ounces; pure water, one gallon. Upon the lime, first slacked with a little water, pour the remaining water and shake them together. Cover the vessel tightly and let stand three hours; then put into well-stoppered glass vessels, lime and all. The clear solution *only* is to be used.

Pepsine and lactopeptine are both of much value in indigestion; either of which is to be given directly after nourishment. Fifteen grains of the saccharated pepsine, or lactopeptine, as generally prepared, is the dose for an adult.

In cases in which diarrhœa is present, and not quickly controlled, the aromatic syrup of blackberry may, with great advantage, be mixed with the chalk. The dose of the blackberry for an adult is from one to two teaspoonfuls.

If, however, the stools consist of slime or blood, and if there is a frequent, painful, and vain disposition to go to stool, dysentery is probably present, and the blackberry or other astringents should not be given; and, indeed, if such symptoms occur, the mother should not undertake to treat the case at all.

If sore mouth coexists with the indigestion, a half-teaspoonful of finely-powdered chlorate of potash may be mixed with four teaspoonfuls of pulverized white sugar, and a pinch of the mixture sprinkled on the tongue every three hours.

In case constipation is the condition of the bowels instead of diarrhœa, Husband's Calcined Magnesia may be given as the child's bowels need it. Dose for an adult a teaspoonful. Given in milk it is not unpleasant, and is an efficient laxative. Or the Cascara Cordial may be given. Dose for a grown person from one to two teaspoonfuls.

Vomiting in Indigestion.—If a child vomits from improper food in the stomach, or from overloading the stomach, it is nature's mode of cure, and, if need be, should be assisted by the administration of a mixture of warm water and salt. If the

vomiting proceeds under other conditions of indigestion, the pepsine is excellent to allay it ; so is sub-nitrate of bismuth and belladonna. Dose of the bismuth for an adult is from ten to twenty grains, and of the tincture of belladonna as follows: One part of the specific tincture, nine parts of alcohol; mix. Dose for an adult: three drops every two hours.

A mustard poultice on the region of the stomach and on the soles of the feet is a great help, made thus: Dip a slice of bread in hot vinegar; when the bread softens take it out and sprinkle mustard over it. Or in infants, black pepper and ginger are to be preferred.

If the child has colic in the course of an attack of indigestion, peppermint, ginger, or anise-seed tea may be given. But never give opium to your babe in any form. It is a perilous medicine for children when given by one of so small degree of medical knowledge as mothers or nurses are expected to possess. It should ever be kept in remembrance that nearly all the patent and popular soothing and teething syrups and cordials do contain opium in some form. Let these dangerous weapons entirely alone.

Keep the feet very warm; put hot flannels on the abdomen wet with camphor and glycerine; lay the child with its face downward.

If diarrhœa, vomiting, or colic of indigestion has been ascribed to dentition, and neglected too long, or if the hygienic rules and simple remedies named in these pages do not early control it, a physician should by all means see the little patient, for the simple disease may glide into a slow or an acute form of gastric or intestinal inflammation.

Convulsions in Indigestion in a previously healthy child, if caused by improper food or an overloaded stomach, as they generally are in such children, are far more terrible to the mother than dangerous to the patient.

The treatment obviously is to get rid of the cause. Therefore, if the cause is undigested food in the stomach, give a dose of the syrup of ipecac. every twelve minutes until the offending substance is ejected. Dose for an adult is eight teaspoonfuls. Or

if this is not at hand, a solution of common salt in warm water will answer the purpose, and a little ground mustard will assist its action. Dose of the salt for a grown person is four teaspoonfuls in a tumblerful of warm water; of mustard one-fourth the quantity.

Put the child, at the same time, in warm water, and if the head is hot, apply cold water to it until it is restored to the natural temperature.

Convulsions occurring in the course of severe disease or in a sickly child, are usually full of danger, and the mother cannot trust herself at all with the treatment. If, however, a physician cannot be had for several hours, she should do something, and that something should not be just what she should *not* do. A warm bath is again proper here; cold to the head, if hot, and gently rubbing the body with the dry hand. In the way of medicine, tincture belladonna and bromide of potassium are never wrong, and generally of great value. Specific tincture belladonna one part, alcohol nine parts; mix. Dose for adult, three drops in a teaspoonful of water every two hours. Adult dose of the bromide is from five to ten grains, dissolved in water every two hours—one hour apart. In adapting the doses to children the rule on page 246 must be remembered.

4. CONSTIPATION.—If the bowels of a child have habitually been regular, but become constipated, it may mean nothing more than a temporary effect of slight indigestion; or, on the other hand, it may mean the insidious approach of serious disease, and especially disease of the brain or its membranes. Hence, if the child is feverish, or the head hot, at the time of, or soon after the commencement of constipation, a cathartic of castor oil or calcined magnesia should at once be given. And a few doses of aconite and belladonna each every alternate hour. Dose of each of these excellent medicines for an adult is three drops of the mixture of one part of the homœopathic tincture to nine of alcohol. If by these means the symptoms are not speedily relieved, send for your physician.

But *simple* constipation is often inclined to become habitual with children. It should not, however, be permitted, for it is

the mother of many evils. When this state of things commences, the great idea in cure is to form a habit of *regularity* in the child. This, in the nursing infant, is usually best accomplished by the use of injections of warm water in which a little common salt is dissolved, or of warm water and castor oil. These enemas should be regularly given at a stated hour every day until they are no longer needed. In administering them great care should be taken that the nozzle of the syringe is well oiled; that the child be not hurt in the introduction, and that no air is forced into the bowel; to prevent the latter, use the instrument with warm water for the purpose of expelling the air before the introduction.

The habit may generally be formed with older children by the use of laxative foods, such as oatmeal gruel, Graham mush, perfectly ripe fruits, etc. By all means, every child should be required to make the attempt to evacuate the bowels at a certain hour every morning.

If these alone are insufficient to correct the constipation in infants or children, small doses of calcined magnesia, or of Cascara Cordial, as prepared by Parke and Davis of Detroit, may be given to assist, but not to take the place of the other remedies.

5. Colds.—A simple cold in itself is perhaps a trivial thing. Not so, however, its frequent consequences. It is certainly one of the most *frequent* evils of infancy and childhood, and the frequency is far greater than is at all necessary. If a child is insufficiently, or in any way improperly clothed; if allowed either to creep or stand around the crevices of doors or windows in cold weather; if the room is over-heated and the child permitted to go from it into the cold, open air without extra covering; if the feet are wet or nearly frozen on coming in—if a cold is then taken, say not, "I cannot keep my child from taking cold."

The symptoms of a cold are too well understood to be repeated here.

The Cure.—Since a cold is liable to eventuate into serious disease of the respiratory organs, it should receive attention in its

early stages. A warm bath, a warm covering up in bed, and a few doses of belladonna, will usually remove a recent cold. For the dose, see page 251.

If sore throat accompanies a cold, the belladonna is an efficient remedy for it. And the patient may also swallow half-teaspoonful doses of a strong solution of salt in water.

These simple remedies will usually cure a common sore throat from a cold in a day or two; but it is of great importance to know whether it is from a cold or not. For if the case is diphtheria or scarlet fever, precious time will be lost if the disease is not early distinguished. See those diseases elsewhere for their diagnosis.

If, in the course of a cold, a cough, more or less expectoration, and a moderate fever intervene, making a bronchial catarrh of it, aconite should be given in alternation with the belladonna. For the dose, see page 251. Stimulating applications should be kept on the chest, such as chopped onions fried in lard and sprinkled well with ginger. After the acute symptoms, as fever passes away, if the cough continues, the following mixture will be of advantage: hive syrup half an ounce, wine of ipecac. one ounce; mix. Dose for a grown person thirty drops every three hours.

In all cases of even a simple cold, the child should remain in the house and out of cold draughts.

It should be remembered that pneumonia, a dangerous disease, may proceed from a cold: hence, if the child has high fever, flushed face, and quick, abrupt respirations, trust yourself no longer with the case.

6. CROUP is a disease which is well calculated to alarm parents. *Membranous croup* is a disease so fatal that there is need for alarm. *Spasmodic croup*, however, is not usually attended by much danger, and yet so sudden and violent is its onset that lookers on are terror-stricken. It is evident, then, that in a case of croup, the mother should be able to distinguish very early the form of it. The following are the chief differential features: Membranous croup quite generally commences moderately with some fever and slight hoarseness. The fever continues, and the

hoarseness increases, to which there is soon added the characteristic ringing cough. The difficulty of breathing and the croupal sounds are more and more intense with each repeated paroxysm, and soon continue in a less degree during the intermissions between the paroxysms, and grow worse with the recurrence of each interval. Finally, if there is no improvement, the voice and cough give no sound, while the respiration is more and more difficult, and the poor little sufferer is dead. Consciousness is clear to the last. The fearful agony of the little dying one is anguish to look upon. To the doctor, when he can give no help, it is trying to the most intense degree. To the parents, it is like twisting the hearts from their bodies. May your darlings be saved from this disease of mortal terror.

Spasmodic croup is, on the other hand, often preceded by a slight cold and hoarseness—sometimes not. The paroxysm usually occurs at night *suddenly* The child's appearance is that of suffocation, the face flushed, the actions and looks denote intense anxiety and suffering. The respiration is attended by the characteristic croupal sound, a hoarse, prolonged hissing, and the cough is hoarse and ringing. After a short time these symptoms subside, and the child seems almost well. There may be one paroxysm only, or more than one, and usually on the succeeding night.

These differential symptoms between the two kinds of croup will give the parents a pretty good clew as to diagnosis, and then if the child is subject to attacks of spasmodic croup, and the symptoms of the case are more in correspondence to this than the other form, it will go far to substantiate the conclusion. But true, or membranous croup, is so full of peril, that I would advise parents to call a physician at once, at the first symptoms of either form of the disease, lest the worst form may be at hand. When, however, a child is subject to spasmodic croup, the mother's skill may generally and safely be first used.

Treatment.—For every family to keep croup remedies in the house is wise, that something may be done before the doctor comes.

At the commencement of the symptoms of either kind of croup, give the child an emetic as follows: powdered alum two level teaspoonfuls, ipecacuanha (ipecac.) syrup, eight teaspoonfuls; mix. Give the infant half a teaspoonful, and older children a teaspoonful of the mixture at a dose every fifteen minutes until vomiting is produced.

While administering the emetic put the child into a warm bath for ten minutes. After vomiting occurs, give an infant one drop, and older children two drops of the following mixture every two hours: homœopathic or specific tincture belladonna two drops, alcohol fifty drops; mix. Give in a teaspoonful of sweetened water. Also give the infant one grain, and the older child two grains of spongia every two hours; making the two medicines come one hour apart. Prepare the spongia as follows: after roasting a thoroughly cleaned piece of the finest sponge in the oven until it is of a light brown color, take one part of it, to nine parts of sugar of milk and rub them long and well together, and it is ready for use.

Also put half a teaspoonful of tincture of iodine in half a cup of boiling water, and hold it under the mouth and nose of the child, and let him breathe the fumes of it for five minutes. This to be repeated every hour, both during and at the interval of the paroxysm, and to be made new every time.

7. PROLAPSUS ANI, or a protrusion of the rectum itself or its mucous membrane, is a frequent consequence of diarrhœa in children, and an occasional result of costiveness. Since parents often call this affection piles, and neglect it until the prolapsed rectum becomes so swollen as to make it difficult even for a doctor to return, it is of some importance that it be early recognized and reduced.

Treatment.—In most cases, if attended to when it first appears, the mother can replace it with very little difficulty. Let the child be placed on its back, and gentle upward pressure be made upon the rim-like protrusion with the thumbs or fore-fingers previously smeared with lard. Or if this fails, introduce the well-oiled fore-finger into the rectum itself, when well-directed pressure with the other hand will cause the protruded part to slip back to its place.

If the prolapsed part of the intestine has become much swollen, an application of cloths wet in cold water will be essential before the reduction is attempted.

After the protrusion is reduced, the anus should be washed twice a day with a solution of alum in water, a teaspoonful of powdered alum to sixteen tablespoonfuls of water.

If the parts have become so weakened that the prolapsus recurs with the ordinary exertions of the child, a compress should be applied and held in place by a T bandage.

8. COMMON EARACHE.—I know from my own experience how to pity a child suffering from earache. It may generally be cured quickly as follows; tincture aconite ten drops; morphine one-quarter grain; glycerine four teaspoonfuls; mix, and put into a vial. Shake the vial; turn a few drops into a teaspoon; warm comfortably over the blaze of a lamp; lay the child on the side opposite to the aching ear, and turn the mixture in, and let the child remain in the same posture for half an hour. To make the cure the more rapid, rub a little chloroform on the ear and around it.

In giving the treatment of the preceding affections, for reasons which are obvious I have made the treatment as simple, and given as few remedies as the nature of the cases would allow; and while what has been written cannot by any means make the mother her own family physician in all cases, it will, I trust, be her guide, in some degree, in the management of her children in the little ailments with which they are so ordinarily afflicted.

For other affections and accidents, the mother is referred to the next subject, and to "Infectious Diseases."

WHAT TO DO IN ACCIDENTS OR IN CASES OF EMERGENCY BEFORE THE DOCTOR COMES.

It is sometimes said that if medicine were divested of its mysteries, the gods would come down to us in the likeness of men, and obliterate all doctors, or rather in a twinkling metamorphose all men and women into one grand medical fraternity. A wel-



AN EMERGENCY CASE.

come truth, if only it were credible. In the attempt to accomplish this result, ponderous books called "Family Physicians," "Every Man his own Doctor," have been born. But somehow they all fail to make doctors of the children of men.

Medicine in itself or surroundings is no more mysterious than geology or philosophy, or any other science. If you do not understand the science of therapeutics, do you therefore take it for granted it is because mysteries surround it? No man can be a master of any science until after long, laborious study and observation; and of medicine, not then, not because of the environing mystery, but rather that the science itself is not perfected, and no man, however learned, is capable at all times of making perfect applications to diseases and constitutions. If after a man has spent years in the study of chemistry, learned the actions and reactions of medicines, learned the anatomy and physiology of the human body, the pathology of the various diseases, and the pathological changes which are made in their course, thoroughly studied, not only the general virtues and powers of medicines, but also their special effects on all diseases, in all their stages and changes, then to all adding years of practical experience at the bedside of the sick—if after all these one finds himself barely on the shore of the great ocean of therapeutics, what indeed can be the definite, practical medical knowledge of one who has superficially, or even profoundly, read only a "family doctor book?" Hence those who base their knowledge of medicine and treatment of diseases on such a book, and on its strength doctor their own families to save the fees of the physician, surely take upon themselves fearful risks, and presumptuous responsibility entirely foreign to reason and parental affection.

An ounce of prevention is truly worth a pound of cure. With facility, one may learn the natural laws of health, and by obeying them, often keep the doctor from his door; but all cannot give the time and study necessary to become skilful physicians. It is entirely beyond possibility, as well as beyond the nature of their vocations. To prevent sickness as far as possible, by learning, obeying and causing the children to obey hygienic laws; to learn the distinguishing features of, and to treat the

minor ailments; to be prepared rightly to meet great or small cases of emergency, either of disease or accident, before the arrival of medical aid; wisely to nurse the sick—*these* every parent, and especially every mother, should learn—and what more can be done by a non-professional person?

DROWNING.

After taking the drowning person out of the water, quickly turn the body on the face for a moment, sweep your finger around the mouth. This will give escape for the water and other accumulations in the mouth. This done, turn the body on the back, and put something under the shoulders to raise them a little; and then immediately let an assistant hold the tongue out of the mouth, using a pocket handkerchief, lest it slip from the grasp; let others strip the wet clothing off and throw on dry blankets, shawls or anything at hand, and apply hot applications, as hot bricks or stones, or sand heated by the sun, and *you* during all this time are to make the attempt to restore respiration artificially, thus: 1. Place yourself on your



From Packard's "Sea-Bathing."

knees behind the top of the head, take hold of both arms, just above the elbows, draw them up over the head, keeping them well away from the sides, and causing them to meet above the head, and then pull upon them for a moment; thus inspiration is effected by enlarging the cavity of the chest. 2. Lower the arms again by bending and bringing the elbows over the chest, making firm pressure upon the lower ribs; this effects expira-

tion, or presses the air out of the chest. The whole process should last about four seconds—the part of it which makes the



From Packard's "Sea-Bathing."

inspiration about three, and that of the expiration the other second, making about fifteen complete respirations per minute. Do not cease this attempt at restoration for an hour or more—not till the heart itself has stopped its pulsations.

Smelling salts applied to the nose are of advantage. As soon as swallowing is possible, frequently repeated doses of brandy and water should be given, until the patient is warm, or reaction takes place.

Under ordinary circumstances, after removal from the water, time should not be lost in taking the patient to a house. But if successful in the resuscitation, then removal to a warm bed must not be delayed, beef-tea given, and the breathing for some time carefully watched, lest it again should cease.

HANGING.

Hanging and suffocation by the gases, after removal to the pure air, should be managed by the employment of artificial respiration, as described in case of drowning.

FOREIGN SUBSTANCES IN THE THROAT.

Introduce the forefinger at once and fearlessly but carefully into the throat, and if the foreign body is not down too low, it generally can be felt and hooked out with the finger or finger-nail. Or if the substance is sharp or pointed, as a pin, it may sometimes be grasped with a forceps, or blunt-bladed scissors. If unsuccessful by either plan, let a surgeon be called, and the patient, while waiting, kept quiet.

If any substance gets into the windpipe, coughing will instantly be produced, and the offending thing often expelled. Blows, with the flat hand, not too hard, on the back, will assist nature's efforts. If both fail, surgical skill must come to the rescue.

Another method said to be very effectual in expelling foreign substances from the throat is to take the child up by the feet, letting the head hang down, and giving moderate blows with the flat hand between the shoulders.

FOREIGN BODIES IN THE EAR OR NOSE.

Children are often inclined to put small things in the ear and nose, but have no idea how to get them out. If in the ear, a stream of warm water moderately forced behind it from a syringe will often remove it. If in the nose, hold the free nostril tightly, and directing the child to blow his nose *hard*, will often be successful. If these plans fail, forceps or a bent hairpin may be carefully used for a short time, but not too long, lest the organ be injured, or the foreign body be such as will swell with the moisture, and make it difficult for the doctor to extract.

If an insect gets into the ear or nose pour in warm sweet-oil, or glycerine, or warm water, and drown it out, or make it float to the surface, whence it may be taken out. Dr. B. F. Kingsley, U. S. A., relates a number of cases where soldiers sleeping on the plains have come to him to have bugs removed from their ears. Accidentally he discovered that by holding a lighted candle near the ear the insects would at once leave the cavity and come forth. The patient should be in the dark when this is done. It is worth remembering.

FOREIGN BODY IN THE EYE.

Never rub the outside of the lid. If the offending substance is under the lower lid pull the lid down; let the eye be turned towards the nose, and brush the particle out with a soft cloth or camel's-hair pencil. If the substance is under the upper lid, turn the lid up over a pencil and proceed as before. If the particle has entered or adheres to the outer coat of the eye, better not risk yourself in an attempt to remove it.

BURNS AND SCALDS.

These are dangerous to life in proportion to the surface they cover and the depth they penetrate.

In their treatment, when taking off clothing, great care should be had not to strip the skin off. *Immediately* after the accident —or precious time will be lost if the burn is severe—mix together equal parts of pure glycerine and well-beaten yolk of egg, and apply a layer to the burned or scalded surface, to be repeated at intervals of about three hours, but do not rub or wash the layers off. These applications form a sort of an artificial skin impervious to the air, soothing in their nature and efficacious in the cure. If the case is not severe enough to render it necessary to call a doctor, and if at any time there is an offensive odor, one teaspoonful of the saturated solution of carbolic acid should be added to four or five tablespoonfuls of glycerine and egg.

An application of a cloth wet with a strong solution of bicarbonate of soda (baking soda) is a good remedy for moderate burns.

Burns by caustic alkalies should at first be treated by a free application of vinegar; those with acids by a solution of soda, and then as any other burns.

In case of coldness of the feet, and great prostration following burns or scalds, brandy must be administered and bottles of hot water be put around the patient.

If any burn or scald is accompanied by any untoward symptoms, a skilled physician is your only safety.

SUNSTROKE.

Sunstroke, or heatstroke, is not always by any means caused by exposure to the direct rays of the sun; more often, perhaps, by long-sustained high temperature in a confined, oppressive atmosphere. However it comes it is full of danger, both the attack itself and the consequences in the impairment of the brain and intellect.

Symptoms.—Often preceded by a sense of oppression and headache, it issues in unconsciousness, labored breathing, and an intense heat and dryness of the skin.

Treatment.—The great object in the treatment is to lower the temperature of the body. In doing this, however, great violence or shock is to be avoided. Hence, the dashing of cold water over the patient, usually practiced, is not advisable. To place the patient in cold water up to the neck and apply pounded ice to the head, or turn cold water upon it alone, will answer better. If so situated that the cold bath is impracticable, a sheet wrapped around the body and kept cold, or sponging with cold water, will do. Upon the return of consciousness and coolness of the body the cold applications are, of course, to be discontinued, and to be again repeated under the same conditions for which they were at first needed.

As soon as the patient can swallow give three drops every two hours of the following mixture: Homœopathic tincture belladonna and of aconite each ten drops; alcohol, ninety drops; mix. I am satisfied that this remedy not only has a beneficial effect upon the removal of the attack itself, but also in the restoration of the brain to its normal condition.

FREEZING.

If the whole person has become chilled through and through, the chilling will be followed by a prostration which will require careful management. The object here is just the opposite of that required in sunstroke—to restore the natural *warmth* of the body—but this must be done very gradually and very uniformly. Let the patient be put into a moderately warm bath, which is to be made gradually warmer, until it is as hot as can be well borne. Or hot blankets may be put around the person on the same plan—that is, put on an additional blanket from time to time. Hot teas may be given, and if the patient is *greatly* prostrated, hot slings of brandy or whiskey are demanded.

Frostbitten parts are to be treated on the same plan: gradually raise the normal temperature of the part by dipping it into cool water, which is gradually to be made warmer, and by gentle rubbing.

WOUNDS.

Persons frequently receive wounds which are not sufficiently

serious to need the attention of a surgeon. There is not, nevertheless, one in hundreds who knows how to care properly for those little hurts.

Contused, or bruised wounds, which cause discoloration of the skin without cutting it, as a black eye from a blow, are best treated at first by the application of cloths wet with a mixture of tincture of arnica one part, cold water eight parts. After the swelling and pain have subsided, the application of cloths wet with hot water will expedite the removal of the effused blood that causes the discoloration.

Incised, or cut wounds, are exceedingly common, and much abused in their management. Many merely wrap a cloth around such a wound. If ever so gaping, they let it gape, and wait for the healing through the long process of sloughing and granulation!

Unless incised wounds are so open, or so situated that stitching is required, the father or mother can dress them just as well as a doctor. For this purpose every family should keep a little surgeons' adhesive plaster in the house. When an accident of the kind happens, a strip of the plaster from a fourth to half an inch wide should be applied as follows: firmly attach one end of the strip to one side or lip of the wound; closely draw together the two edges of the wound, and then attach the whole strip of plaster. As many such strips must be applied as is necessary to cover the entire injury. Last, put on a bandage, but not so tightly as to interrupt the circulation of blood in the part. The two edges of the wound being now in proximity, the healing process will usually go on rapidly—heal, as the doctors say, by the first intention.

Lacerated, or torn wounds, such as are caused by machinery, if bad, must be attended to by a surgeon; but before his arrival, the torn parts should be carefully washed, if any foreign matter adhere to them, replaced nearly to their normal location, and then covered with a cloth wet with cool water.

HEMORRHAGE.

Bleeding generally results from wounds, and is sometimes

profuse. It may proceed from the capillary vessels, veins, or arteries.

When the bleeding from the capillaries or veins is sufficiently profuse to require interference, the application of cold, and pressure upon and below the wound will usually arrest it; though the application of hot wet cloths is often efficient when there is an oozing from a large raw surface.

A WOUNDED ARTERY may be distinguished from a wounded vein by the manner in which the blood flows. If from an artery, the flow will be profuse, of a bright red color, and ejected in repeated jets, which correspond to the beat of the pulse.

Every surgeon has been summoned to cases of this kind of hemorrhage in which the current of life had run very low, or even death ensued, that would have resulted otherwise had the person wounded, or those around him, possessed a little knowledge of *how* to arrest the bleeding. An intelligent man told me that during the war of the rebellion his captain fell at his side wounded in the foot; he carried the wounded man under a tree near by and tried to stop the terrible bleeding, but could not, and the captain, a brilliant man, was soon dead from the loss of blood. If intelligent—even intellectual men—do not learn to staunch bleeding arteries in such a school as war, how many may be expected to learn it in civil life? And yet in civil life *any* person, *any day*, may be called upon to save a life of a wounded man. Will he prepare himself to do it?

Treatment.—In *every* case of hemorrhage from an artery, a surgeon should be called as expeditiously as possible. But the flow of blood ought to be stopped before his arrival, lest the health or life of the wounded person be lost by waiting.



In wounds of arteries of the hand, or of the arm below the elbow, tie a large knot in the middle of a large stout handkerchief, and tie the handkerchief tightly around the arm just above the elbow, so that the knot will press on the front of the arm.

If the wound is above the elbow, the handkerchief must still be placed above the wound. Or, a hard compress, as large as a man's fist, may be made, and shoved tightly up into the armpit, and the upper arm brought snugly down upon it.

For wounds of the foot, or of the leg below the knee, the bleeding is to be arrested in the same manner as that of the hand and forearm: the knot being placed above the calf of the leg and behind the knee, and then flexing the leg so that it will press firmly against the knot.

If the hemorrhage is from a wound in the thigh, the knot is to be placed in the hollow immediately below the groin.

Or, if hemorrhage from any of the parts named is not successfully arrested by the above means, the handkerchief may be loosely tied, so as to form a loop, and then twisted round and round sufficiently to stop the bleeding by means of a cane or stick passed through the loop. If this means be used, care should be taken that the knot in the handkerchief or cloth has no sharp, hard projections, but smoothly oval, and that no more twisting is applied than is necessary to stanch the bleeding.

If the wound is large, and the cut end of the artery can be seen, perhaps you can grasp it with forceps, or even with the thumb and forefinger, and a stout string passed around it by another person. Or it may be that simple steady, firm and continued pressure with the thumb just above the wound, and as close to the spot from which the blood proceeds, will be successful.

BLEEDING FROM THE NOSE is frequent with some children, and while it is moderate it is not hurtful to the health of those who are well, and actually beneficial sometimes to plethoric persons. But this hemorrhage is sometimes so profuse as to become not only serious, but actually dangerous to the life. In such cases it needs attention.

Treatment.—1. Lay the person down, with his head well raised. Let him keep his hands raised above his head. Close the bleeding nostril by holding with your thumb the loose part of it tightly against the middle bone of the nose, so as to expedite the formation of a clot. Let an attendant apply cold water to the head, to the nose, and around it.

2. If the above plan fails to arrest the hemorrhage, direct the person to snuff vinegar up the bleeding nostril.

3. If not yet successful, take a pledget of lint, or cotton batting, tie a stout thread tightly around it, wet it in vinegar, strong solution of alum in water, or what is still better, but not likely to be at hand, the solution of the persulphate of iron, and then shove the cotton carefully along up the bleeding nostril to the position in which the blood will cease to flow either out of the nostril or into the throat; and after this is left a few hours it is carefully to be withdrawn.

There are certain cases in which the nostril has to be plugged, both in its anterior and posterior part, which will, of course, require a physician to do.

HEMORRHAGE FROM THE LUNGS may be known by the bright red, and, usually, frothy appearance of the blood.

Treatment.—Keep cool in body and mind; take a sitting posture in bed; keep quiet; swallow a few lumps of ice, and send for a physician.

HEMORRHAGE FROM THE STOMACH may usually, except when mixed with food, be distinguished by the dark color and coffee-grounds appearance of the blood.

Treatment.—Swallow ice, as before, and small swallows of vinegar, or a strong decoction of tea, iced. Rest in bed. If not soon well your physician must be called.

STUNNING.

When one becomes unconscious by a blow upon the head, or by a shock to the general system, which influences the brain, place the person flat on the back, loosen all the clothing around the neck and waist, give him plenty of pure air. If the skin gets cold, warmth should be applied, and especially to the stomach, spine and feet. If the physician, when he comes, orders whiskey or brandy, give it—not without.

FAINTING.

Fainting may be caused by tight clothing; by a disordered stomach, and the reflected sympathy of the heart; by breathing

air that is deficient in oxygen as it exists in a close room; fright; loss of blood, or the sight of it; or by organic disease of the heart, etc. When caused by disease of the heart itself it is not only dangerous, but may prove suddenly fatal. When it results from most other causes it is alarming rather than dangerous. The immediate condition is, that the heart from some cause, which weakens it for the time, fails to propel sufficient blood to the brain, resulting in the loss of muscular power and of consciousness.

TREATMENT.—A short time since I was called to see a man who was supposed by those present to be dying. About a half dozen were around him assiduously holding him in a sitting posture. He had the pallor of one in a fainting fit. I at once laid him flat, the head, indeed, a little lower than the body, sprinkled cold water on the face, gave him a free supply of fresh air, and held some smelling salts to the nose. The flatness of the patient removed the objection of gravitation against which the patient's heart was before compelled to labor; the other measures excited the heart and brain to action through the nerves of sensation; the equilibrium and force of the circulation were restored, and the patient was soon well—rescued, probably, from death, because the syncope was so total that the great probability was that he would have died under the usage he was receiving. Such is the management of a fainting person.

EPILEPTIC FITS.

Paleness of the face, a frightful cry, a falling to the floor, loss of consciousness, hard convulsions—*this* is epilepsy.

TREATMENT.—Lay the patient flat, put a folded towel between the teeth to prevent the biting of the tongue, control the patient's movements, so far as to prevent injury and no further, and let quiet rest be secured after the convulsions are over.

POISONS AND THEIR ANTIDOTES.

If a poison has been swallowed, send for a doctor as soon as possible, with the information of what the poison is, and be active until he arrives, since by a timely administration of anti-

dotes kept in every house for culinary purposes, and such means as all may use, the sufferer may often be rescued from danger, and perhaps from death; while by the waiting all may be lost.

For the ready convenience of families I will give a list of poisons and their antidotes in a condensed form.

1. Unknown Poisons.—Give lukewarm water alone, or with ground mustard, or ipecac., to provoke profuse and quick vomiting. After vomiting, give oil, raw eggs, or milk freely. If the face is pale, hands and feet cold, give hot tea, with whiskey or brandy; put hot bottles of water around the patient and plenty of warm coverings.

2. Acids, *Sulphuric, Muriatic, Nitric, or other sour Poisons.*—Give alkalies, such as a solution of lime, magnesia, soda, saleratus in water, drank freely. Then vomit the patient as in No. 1, and also stimulate under the same conditions of coldness, paleness, etc.

3. Carbolic Acid.—Vomit the patient if possible; give oil, melted lard, or cream and milk copiously. Promote warmth of body by hot applications and free stimulation.

4. Alkaline Poisons, *as Hartshorn, Soda, Potash, Lye.*—Undiluted vinegar, one-half or one pint; then give an emetic as in No. 1; then oily drinks, and also whiskey if the surface is cold or face pale.

5. Iodine, *and Iodide of Potassium.*—Starch or wheat flour, mixed with water, and drank freely. Afterwards, vinegar and water.

6. Arsenic.—Give emetic first, and, without waiting a moment for it to take effect, give freely of oil, milk, magnesia; as soon as it is possible to obtain it from the drug store, give dialysed iron fluid in tablespoonful doses, and follow each dose with a teaspoonful of common salt dissolved in a cup of water; then vomit the patient again, and give a dose of castor oil.

7. Phosphorus *and ends of Matches.*—Give an emetic; then magnesia in water, and large draughts of elm or gum-arabic water. Never give oil of any kind.

8. Creosote.—Whites of eggs, milk, wheat flour mixed with water, copiously.

9. Arnica.—Give vinegar.

10. Opium and Preparations, *as Laudanum, Morphine, Paregoric, Soothing Syrups, etc., and Chloral.*—Give an emetic promptly. Twenty grains of sulphate of zinc dissolved in water, to be repeated every ten minutes till vomiting is produced. Or if the zinc is not at hand, give a teaspoonful of powdered alum or mustard as often. Then give ten drops tincture belladonna every half-hour, and strong tea or coffee freely. Keep the person awake if possible. If the breathing fall below eight to the minute, or cease entirely, employ artificial respiration. (See page 258.)

11. Aconite.—If the case is seen almost immediately after the aconite is swallowed, induce vomiting. Then stimulants internally and externally, and keep the person *warm*. A few twelve-drop doses of digitalis may be of advantage.

12. Acetate of Sugar of Lead.—Vomiting, epsom salts, castor oil and milk are to be administered.

13. Strychnine.—Emetic first; bromide of potash in twenty-five-grain doses dissolved in water. A cathartic. Strong coffee. Inhalation of chloroform. If breathing ceases, employ artificial respiration. (See page 258.) Keep patient in darkened room, and let absolute quietness prevail.

14. Corrosive Sublimate, *Tartar Emetic.*—Provoke vomiting. Give strong tea and milk and raw eggs freely.

15. Preparations of Copper, *foods poisoned by being cooked in copper vessels, and pickles made green by copper.*—Whites of eggs and milk drank freely.

16. Alcoholic Liquors.—When intoxicating liquors are taken so immoderately as to be poisonous, vomiting must be produced; hartshorn must be given—a teaspoonful dose in a tumbler of water, or vinegar and water freely; and the person must be kept warm. *Be sure*, however, that it is intoxication, and not apoplexy you are dealing with, before giving an emetic; for an emetic might destroy the patient, if it be apoplexy.

17. Decaying Meats or Vegetables.—Encourage vomiting; give a cathartic and several doses of sulphite of soda in twenty-grain doses; or powdered charcoal will do.

18. Bites of Venomous Serpents.—Tie a cord quickly and tightly above the wound, and it is better also to cut out the bitten part. Wash the wound with warm water, to which should be added, if obtainable, saturated solution of carbolic acid—two parts water, one part carbolic acid. Extract the poison of the serpent by sucking the wound. Thrust a red-hot iron into the wound, if it has not been cut out. Then keep the part covered with cotton batting wet in equal parts of hartshorn and sweet oil, or solution carbolic acid, one part; water, eight parts; sulphite soda, a tablespoonful to half a pint of the mixture. Give internally of the following: sulphite soda, a teaspoonful; water, eight teaspoonfuls; make solution; dose for an adult, a teaspoonful every three hours. Give whiskey enough to cause and sustain slight intoxication until the doctor comes. If the inflammation becomes great, the cord must be loosened a little.

19. Stings of Insects.—Application of oil and hartshorn, as in No. 18, or saturated solution of carbolic acid, one part; water, four parts; sulphite soda, a tablespoonful to half a pint of the mixture.

CONVULSIONS OR FITS.

Convulsions or fits from undigested food in the stomach have been already referred to, but for the convenience of the frightened mother, I will place it here in brief for ready reference.

Give five to ten grains of ipecac. powder in warm water every fifteen minutes till vomiting is provoked. Or from one-quarter to one-half teaspoonful of powdered alum, or mustard, as often. Immerse the little patient up to the neck in warm water. After the emetic has taken effect, give from one-sixth to one-third teaspoonful of bi-carbonate of soda dissolved in water to neutralize the gastric acid.

KEROSENE OIL.

Dangers, Tests and Safety.—That kerosene causes many appalling deaths and conflagrations is too well known to need a word of comment. Yet when good and properly used it is *safe*. It is not safe to use oil which will not stand the flashing test of 150 degrees. And at that, if you do not want to be burned up, you should not pour it into the stove to kindle the fire!

It will be seen that every one should learn to test kerosene, and especially will it appear so when it is recollected that much oil is sold for 150° oil, when actually it is only 115° or less. The best thing to do to make sure of goodness of the kerosene oil you are to use is to purchase enough at once to last several months, and test a specimen of it, and if it flashes below 150°, return it to the one from whom you bought it. In careful hands, what is called the flashing test is reliable. It determines the lowest temperature at which it gives off an inflammable vapor. The process may be performed as follows: 1. Half fill a pint cup with the oil you want to test. 2. Place this cup into a larger one containing water, and in such a manner that cup will not touch cup. 3. A spirit lamp is to be placed under the large cup containing the water, and a thermometer in the cup containing the kerosene, up to a little above its bulb. 4. So regulate the blaze of the lamp that the temperature of the oil in the small cup will not rise more than two degrees per minute. When the temperature of the oil is raised sufficiently that it will take fire when a lighted match is passed along about two inches above the oil, *that* is the flashing test of the oil in degrees as indicated by the thermometer.

Another test, much better than none, but not always entirely reliable, is to thrust a lighted match into the cold oil, and if the oil takes fire it is not safe, and if the match is extinguished as suddenly as if thrust into water, it is good kerosene.

When the vapor of kerosene is mixed in certain proportions with air, a highly explosive mixture is formed. Therefore a lamp is in more danger of exploding when *partly* full of oil, than when *full*, because there is space in the former case for a greater quantity of the explosive mixture.

The lamps used should be metallic safety lamps, having the end of the burner considerably elevated above the body of the lamp. Glass lamps are not safe with any oil, however high the flashing test, and if used at all should not be carried from place to place when lighted.

Always fill the lamps by day—*never while lighted.* If from any cause it becomes necessary to fill a lamp at night, no light

or fire of any kind ought to be nearer to the oil-can and the lamp to be filled than eight feet, and there should not be the least current of air. The safe way is to fill all lamps in the morning. Keep the oil-can in a safe place. Never kindle a fire with kerosene. Beware of the so-called non-explosive (?) fluids of every kind which ignorant or unprincipled dealers and recipe peddlers would induce you to purchase.

WHEN ONE'S CLOTHES TAKE FIRE.

When a woman or a child is standing near an open fire or a red-hot stove, sometimes without a moment's warning the garments catch on fire. But a great proportion of such ghastly conflagrations proceed from kerosene oil.

In view of these frequent and appalling accidents, it is well for all to make up their minds previously what they *will* do if it happens to them or friends in their presence. Now what will you do? Run, as so many do, and thus fan the flame, direct it into the air-passages, and then *die*?

Remember that fire cannot burn without air. The great aim, then, is to exclude the atmosphere from the burning garments; and since death is only a matter of a few moments, it requires great quickness of thought and ready presence of mind to act quickly enough and in the right direction.

How shall you then exclude the air from the murderous flame?

1. If water or any other non-combustible fluid is at hand use it quickly.

2. If not at hand, it will not do to run far for them, because if you do the burning person will be beyond the power of water to save. Snatch quickly the first woollen blanket, overcoat, shawl, bed-spread, or other woollen article that can be caught up, wrap it snugly around you (or around the person on fire), and then lie down and draw the covering tightly around the burning part, which will exclude the air and smother the fire. If it is some one else that is on fire, and she starts to run, throw her at once flat upon the floor and make her stay there.

If no article of clothing or bedding is as readily at hand



A RESCUE.

as a sack of flour, throw the contents of that on the burning person.

If nothing is at hand with which to quench the fire (not likely to be the case), lie flat, and roll on the floor. This will at least keep the flame to some extent from the air-passages, while running will feed the devouring flame and hasten and ensure the death you would avert.

PRESENCE OF MIND.

A few words about presence of mind may here be in place. This mental control widely differs in degree in different persons. Some can meet any conceivable exigency perfectly undisturbed, and act as if it were an every-day affair. Others lose their heads, scream and pant at the slightest provocation. The most nervous, if they will, can cultivate coolness of head, and deliberateness of action, and they *ought* to do so. If we *learn* what we should do in certain emergencies, and make up our minds that if occasion presents we *will* practically perform what we learn, it will be a strong help in the moment of trial.

The following examples will better show my meaning:

Three sons of Mr. S. were, with many others, playing ball near a school-house where they were pupils. One of these boys ran for the ball, upon the ice of a small pond not more perhaps than two or three rods across. The ice broke and let him into the water, and one of his brothers rushed to the rescue. The third brother, seeing that both were drowning, thoughtlessly ran to save them both, which of course he was unable to do, and all three sank to their death together, all in the presence of many, some older than themselves, and among them a man, the teacher. Pallid with fear, they all stood upon the shore, riveted to the spot as if they had suddenly frozen in their tracks. However nervous that teacher may have been, had he previously studied what to do in cases of emergency, do you think he would have stood there utterly lost in bewilderment, while those three young lives were perishing? Would he not rather have taken off the coats, scarfs or suspenders of the others, tied them together and thrown one end to the drowning boys, which they

certainly would have quickly grasped, and been drawn to the shore and to safety? The sympathy of the teacher and the scholars was deep, their desire to save strong, and had their actions been suited to their sympathy and desire, then parental eyes would not have beheld their three darlings in their coffins, nor seen them lowered side by side into their graves.

When I was a little lad, an older brother and some other young men were bathing in a creek. Suddenly the brother threw up his hands with a scream, for he was drowning. Although there were excellent swimmers among the number not a rod away, they were all as pale and motionless as if a shaft of lightning had struck them senseless. They only *gazed* in blank astonishment on the drowning young man, who would have perished only for an obtuse but cool man on the shore who could not swim. He reached a long stick to the drowning man, which he clutched, and was saved.

There is danger in going into water to save a drowning person, unless one knows how to do it, and is cool. But in this case the deep water was only a few feet across, and they could have reached and rescued the perishing person by simply throwing to him one end of a pair of suspenders or some other part of the clothing.

At the sudden cry of fire, how many have been startled from their sleep, to find their egress from the burning house apparently cut off; and have perished in the flames because their fright, in many cases, has carried away their reason. One may be sleeping in a room among the upper stories, or the whole building may be so completely wrapped in flames that exit is indeed impossible, but often people perish when in even the second story because the stair-ways are in flames, and he knows he cannot safely jump from the window. If nothing better presents, one should tie some sheets together cornerwise, fasten one end to the bedstead and throw the other end out of the window, and then grasp it and descend by it. Or in many cases the stair-ways are not really impassable, but persons undertake, when the house is full of smoke, to run erect out of the house, and fall and are smothered. It should be remembered that in such

cases the smoke is less dense near the floor, and persons should creep along as low as possible, and go down the stairs backwards on the hands and knees.

When a school-house, church, or theatre takes fire, there is usually a rush made to get out of the building. In the insane attempt, some are crushed, killed or injured, and every one impedes the progress of every other. Sometimes the stairs break down, crushing out many lives. Indeed the heart aches in contemplating the many calamities connected with such conflagrations, almost every one of which might have been prevented, so far as loss of life was concerned, had coolness and presence of mind been used, and all passed out of the burning buildings with due deliberation.

Surely if we will take time to recall the written and unwritten tragic fiery scenes which have come under our knowledge, we shall not only understand but also *feel* the importance of learning what to do in emergencies, and to maintain, under all circumstances, a practical presence of mind.

NURSES AND NURSING.

A good nurse is almost as essential to the safety of a patient as a skilful physician. If the doctor is the *law*, the nurse is the *executor* of the law. For what can a medical attendant do in the way of saving an ill person if in his absence he is thwarted at every step by an ignorant, or, worse still, by one of those knowing (?) nurses? Then, if the poor sick one dies, the doctor quite generally gets the credit of unskilfulness! Yet who in the eye of simple justice is really responsible for the loss of that life?

Many nurses do the best they can; a few are skilled and practically, actively and wisely efficient. It should not be forgotten that every woman and every man during the course of their lives must take upon themselves the care of those who are dear to them in the time of sickness and suffering; therefore the im-

portance that all should become familiar with the complex duties connected with the safety of such as will come under their care. The mothers and fathers, if they deserve the name, are wholly devoted when their children are sick; and the devotion is not less to each other when illness comes to either. Yet how seldom can the physician, if he is skilful and merciful, feel that the best possible nursing known to hygienic and therapeutic science is being given his patient? For nursing, like medicine, is both a science and an art, and the responsibilities connected with the one are not a whit inferior to those of the other, and not much inferior in its intricacy.

We often hear of born doctors and born nurses, and the expressions are well in a certain sense, for some have decided natural talent in the direction of the one or the other; but depend upon it, *no* one was ever born to know all, or the *requisite* knowledge of these things, without *learning* it. The great proportion of men and women must have the most thorough study, training and self-discipline to make them skilled as physicians or nurses.

While an exhaustive treatise on nursing would perhaps receive little attention from the great mass of people, and so prove useless, the *essentials* of the same subject, I trust, will gain the interest of many and prove a special value in the care of their own sick. It is possible that even the professional nurse may gain more or less profit.

The great object to be kept in view in the care of the sick is to assist nature in her battle for the patient's recovery. In order to make this object practically successful it is necessary to keep the patient in his relations to his friends, enemies, things, and surrounding circumstances, free from every annoyance and discouragement, to administer to his comfort, and bring benefit to him by all available means. All this involves certain qualifications in both the professional and non-professional nurse. Some of those qualifications in a general way relate, 1st, to herself personally; 2d, what she ought to know; and 3d, the manner of practising what she knows.

THE PERSONAL QUALIFICATIONS OF THE NURSE.

When a woman has made, or expects to make, nursing her profession she ought first carefully to consider whether or not her character, disposition, temperament, tact, are adapted to this most responsible position she fills, or contemplates filling. If she finds herself wanting in any of these she ought to give up the idea of a life for which she is thoroughly unfit. What manner of woman ought she to be? Whether a professional nurse or not, whoever has the care of a sick person should be *humane* in all things that this word implies, and it possesses a great many attributes, as large sympathy, obliging kindness, and yet stability and firmness; a wakeful, vivacious, and yet a quiet temperament; without a complaining or a tattling tongue, or a disposition to meddle with affairs not her own. If, unfortunately, she is naturally excitable, her excitability should be under the complete mastery of her judgment; her judgment critical and sound, discerning and averting danger, inspiring confidence and hope; a pleasing personal appearance, which implies in the sick-room comely attire, free from trailing skirts, frizzed or loose hair, or a load of jewelry; cleanliness of person and of everything; graceful deportment, and a spotless character. This is not a mere play of words. You may depend upon it that the nurse who has not sympathy is repulsive to the sick; and if she has sympathy uncontrolled, the patient's courage, hope, and the *will* to get well will be lost when most needed. If unkind, she is again repulsive; but if only kind without firmness, many of her patients will become intractable.

If she has a tattling tongue and acts the shrew, her patients might about as well be in Tophet and have done with it.

A pleasing personal appearance that shall win success and the dearest esteem does not essentially involve a beautiful face. If she has beauty, let her thank God and be wise. If she has it not, let her more than make up for the want of it by her sweet, winning, personal charms.

Personally she must be clean, scrupulously nice in her attire, and in all she does, for a slovenly nurse is more nauseous to a civilized patient than the old-style calomel and jalap.

She must possess good common sense to be equal to the manifold duties she has to perform.

When the nursing is done by one or more of a family to which the patient belongs, those should be chosen whose qualifications correspond somewhat to those a nurse should have. If there are none such in the family, they had better force such attributes upon themselves for the occasion, or employ a professional nurse; for these the nurse ought to have, and a sick person has a right to demand it. *Then* content thyself with the sufficiently responsible business of nursing the sick without a single attempt to put on the robe of the physician. Thine is a mission of mercy, and recognized as such in the great sympathetic heart of humanity.

WHAT THE NURSE OUGHT TO KNOW.

In the first place, every man and woman ought to know that in every case of serious illness there should be some one belonging or not belonging to the family to take personal and special supervision of the patient, reporting symptoms to the physician, and caring for the patient. One indeed who will *feel* that, together with the physician, she is responsible for the patient's attention and welfare.

The nurse should inform herself at least in a general way concerning human physiology and hygiene, about which something has been written. A few more hints, relative to a few of the organs in health and in disease, will be of some practical advantage to the nurse, and by the hands of the nurse, to the patient.

1. The Pulse in Health.—The rapidity of the pulse varies considerably in the limits of health. A normal, healthy pulse has a beat steady, even, as the tread of a regular soldier. The average frequency may be stated as follows: soon after birth, from 130 to 140 per minute; in the second year, from 100 to 120; in the sixth year, 90 to 95; in the fourteenth year, 83 to 88; persons in middle life, from 60 to 80; in the old, from 60 to 75.

The pulse is a little more frequent in women than in men; in the morning, than in the evening; after meals, than before meals; in standing, than in the sitting posture; in the sitting,

than in the lying; in the waking state, than in sleep. Exercise of the body, or excitement of the mind increases it; sorrow and despondency usually diminish it.

Since the pulse so greatly varies in rapidity at different ages, in different persons of the same age, and under different conditions in the same person, it is obvious to the reader that all parents should study their own pulse and that of their children in health, so that when illness comes, they may be able to inform the physician how great is its departure from that of health.

It is advisable also for all to gain a practical knowledge not only of the frequency of the pulse, but also its quality both in health and disease. In nursing the sick, this is of no small consequence, especially in cases where stimulants and other supporting measures are in requisition. This knowledge will be a guide, of the benefits which no sick person should be deprived of. We will now consider the pulse in disease, but words alone will teach no one all he should know concerning it; they must be supplemented by repeated and discerning practice on the well and on the ill.

The Pulse in Disease.—In most of the fevers, inflammations and diseases of excitement, the pulse is usually increased in frequency. But it does not follow that depressing diseases are always attended by a slow pulse, for here it may be rapid from some exciting cause located in some part of the system, or rapid from weakness of the heart itself. In the latter case, the system requiring a certain amount of blood, the heart is obliged to beat rapidly, making up in the rapidity of motion what it loses in force. Extreme frequency, as 130 beats per minute in the adult, generally means extreme prostration of the heart alone, or this combined with some organic irritation.

Variation from a healthy pulse does not, however, consist alone in a variation in the *number* of pulsations per minute, but also in the following changes and conditions as the chief ones: 1. The heart may make short, quick, jerking contractions, each occupying a shorter time than is normal, though the number of pulsations per minute may not really be increased. This kind of pulse may indicate nervous affections, or disease of the heart.

2. When the volume of the pulse is greater than in health, it is called a full pulse. It may be known by its striking, in the examination, a large space upon the finger. Such a pulse may mean either strength or feebleness of the heart. It means strength when the pulsations will go on under considerable pressure of the finger; weakness, when moderate pressure arrests the pulsations at the wrist. This latter condition is often associated with impoverished blood.

3. A small pulse is when the volume is less than usual, and is discerned by its striking a small part of the finger in the examination. This pulse may indicate deficient blood, congestion, feebleness of the heart, or a strong, contractive condition of the arteries. And *which* it indicates may generally be known by taking into consideration the general condition of the patient. So with all the classes of pulse.

4. The pulse may be irregular in two ways: it may, for a few pulsations, beat very rapidly, and then slowly; or a pulsation may, from time to time, be omitted, beating normally the rest of the time. The meaning of such a pulse is quite generally either organic or functional affection of the heart. But occasionally it is observed in young healthy people without known cause, and more often in the aged.

5. The pulse is *hard* when it does not readily yield to pressure of the finger—the blood flows irresistibly on. There is, however, one exception to this, when, in the old, the coats of the arteries become ossified. Then the pulse feels hard and tense on account of the ossification. In true hardness, the heart has much strength, and the arteries much tone.

6. When just opposite to the above, the pulse is said to be soft—that is, when the pulsations are feeble and compressible. It denotes weakness; and if small as well as soft, great prostration is present.

A fair knowledge of the pulse is invaluable to any person who has the care of a very sick patient. A few practical hints should, therefore, be closely studied.

The first that should be considered is the possible varieties of the pulse in health. Besides individual differences as to the

number of beats per minute, which has already been considered, there are decided differences in other respects. Thus, for example, there is a great difference as to the size and depth of the arteries in different persons, which give more or less character to the pulse. Hence it is obvious that each adult member of every family should acquaint himself and herself with the frequency and other characteristics of the pulse of every other member when in health. This knowledge will be of immense advantage in the time of sickness.

The pulse should always, if possible, be examined when the patient is entirely free from excitement. The importance of this will be seen when the reader is reminded that a patient's simple attention to the examination will often vary the pulse, and especially so if the patient is a nervous person.

As the pulse cannot be relied upon during mental excitement, so it cannot be immediately after physical exercise.

Position for the Examination.—The sitting, or lying posture, or each in succession, is much to be preferred.

How to make the Examination.—The examination should be made with the forefinger, assisted by the two fingers next it. Never with the thumb. The pressure for the purpose of getting the number of pulsations per minute should be light; for ascertaining the other qualities, the pressure should be alternately light and heavy. Both wrists should at first be examined, for the artery on one side may be larger than the other, or it may occupy a different position, or one be divided.

The best time for examining a baby's pulse is when it is asleep. The chief point to notice is not so much the frequency as the regularity.

2. THE RESPIRATION.—*In Health.*—A healthy infant one week old breathes from forty to fifty times a minute; one month old, from thirty-five to forty-five; one year, from twenty-eight to thirty-eight; three years, from twenty-three to twenty-eight; eight years, twenty to twenty-three; sixteen years, nineteen to twenty-two; the adult, fourteen to nineteen times a minute.

It will be observed from the above that the frequency of respiration varies not only with the different ages of persons, but

also with those of the same age. Consequently, as with the pulse, the heads of families, for use in illness, should ascertain and remember the frequency of respiration of every member. Any decided variation from individual standard indicates more or less departure from health, unless the variation arises from functional or temporary causes. For it must be remembered that mental excitement or corporal activity hurries the respirations; while despondency and other depressing mental states make the number less.

Breathing is regular, easy, and not attended by noticeable sound.

Respiration in Disease.—The chief condition required to produce difficult respiration is the want of due arterialization of the blood. But the pathological conditions which cause *that* are various. Thus, 1. The blood may become so disorganized that it refuses to undergo arterialization in the lungs. 2. The pulmonary capillaries may become so congested as to obstruct the entrance of air into the air cells of the lungs, and retard pulmonary circulation. 3. In pneumonia, bronchitis, pleurisy, consumption, dropsy of the pericardium, etc., the air is more or less excluded from the lungs, the blood is hence not duly oxygenated, and dyspnœa is produced. 4. And therefore, in any given case of difficult respiration, it is wise to investigate the cause of it—or what the disease actually is which produces the difficulty.

What to observe at the bedside are the following: 1. The number of respirations per minute. 2. If any sound attends breathing, and what? 3. If attended by any pain, and where? 4. If deep inspiration can be taken without inconvenience; whether any position of the body makes breathing painful or in any way difficult. 5. And the comparative appearance of respiration during the sleeping and waking state.

3. The Temperature of the human body is ascertained by means of a thermometer constructed for that purpose, and placed either under the tongue or in the armpit next to the skin. In disease the temperature tells and foretells so much, that every family should own a good self-registering thermometer.

The normal temperature of a child one month old is about ninety-nine degrees; four years old, ninety-eight and eight-tenths degrees; eight years, ninety-eight and six-tenths, and of an adult, ninety-eight and three-tenths degrees.

Exercise, mental excitement, heat, cold, sleep, etc., cause slight variations from the above figures, but the variations are slight, for a continued increase or decrease of a single degree is indicative of something wrong. A persistent increase of two degrees makes a mild fever; of three degrees, a moderately severe fever; of seven degrees, a dangerous fever; of ten degrees, the disease will soon prove fatal.

When one is apparently well a slight deviation of temperature from the normal, for a few hours, may have no special significance, but if it remains higher or increases in height for a couple of days, it probably means the approach of some disease.

If, from the commencement of illness, the temperature rises *rapidly* for three or four days, or if it is very high from the first, the meaning probably is some acute disease, as remittent fever, ague, pneumonia, bronchitis, scarlet fever, or diphtheria, but *not* typhoid fever, for in this disease the temperature rises slowly as if to gain a strong foothold at every step.

The nurse, in cases of illness, should use the thermometer several times a day, and mark at what hour it is highest and when lowest. It is not a good symptom if the highest point is reached a little earlier on each succeeding day. But if the increase comes at a later hour each day, it is a favorable symptom. And so if the decrease comes earlier every day, the symptom is good; but if later, it is bad.

It has been stated that a temperature as high as 105 degrees is dangerous. It is doubly so if it has reached such a high point by slow gradations, as in a case of typhoid fever. And if from 105 degrees a rapid fall takes place to half a degree below the normal temperature, stimulants and other support are urgently called for. But if the fall is to two degrees below the normal temperature of health it means impending death. A *gradual* fall *to* the normal point is every way favorable.

Temperature and Nourishment—Food will, if it nourishes,

cause a slight rise in the temperature. In convalescence, therefore, a rise of ¼ to ½ of a degree after eating shows that it nourishes, and is therefore beneficial. But if the temperature rises not at all the food does not nourish; or if it rises as much as one or more degrees the food is too stimulating.

These few hints should convince that the thermometer may in a wise nurse's hand be made a very useful guide in some points of nursing, and thus a great help to the attending physician.

4. The Urine.—The normal color of urine is that of straw, and the normal quantity passed daily is from thirty to fifty ounces by measure. And yet within the bounds of health both the quantity and color may vary a good deal.

In health it has a slight acid reaction—enough to slightly discolor blue test paper.

Less is passed in summer than in winter. Some kinds of food increase and others decrease the quantity and change somewhat its composition. Some mental states also change the quantity and quality.

The chief interest as to the patient's urine, so far as the nurse is concerned, is that she may be able to report to the medical attendant its visible physical qualities. To that end she should observe all its appearances when first passed and on standing, the amount of the twelve or twenty-four hours, and whether its passage has caused pain or uneasiness.

5. The Tongue.—The physician will make his own observations in regard to the tongue. How to interpret the appearances of this little organ, so expressive in many ways, is chiefly valuable to parents in making the diagnosis of disease at its commencement. For such knowledge, aided by other symptoms given in this book, will assure one what is coming—whether it is a slight ailment which will be apt to yield to the efforts of the parents, or some grave disease which requires the immediate attention of the physician, a thing, indeed, of no trifling value, since the very life of the patient may depend upon early-applied professional skill.

The tongue is generally looked upon as a little organ that

addresses itself to the ear. It does that, and sometimes pretty severely. But it also addresses itself to the eye and expresses its meaning very distinctly.

Situated at one extremity of the digestive apparatus it is in sympathy with it; and its sympathy does not end with the digestive organs, but extends to all the organs of the body, standing as a pretty sure index of the severity, progress, and stage of all diseases.

The appearance of the tongue in its normal condition is so familiar to all that it scarcely needs a word of description. In the adult it is moist, nearly free from mucous coating, and of a pale red color. In disease it may be changed in every respect.

1. *Its Color in Disease.*—The tongue is capable of putting on almost every shade of color, and every shade has its meaning. Thus, intense redness indicates a super-arterialized condition of the blood, or intense excitation of the circulation, or inflammation of the stomach, or of the tongue itself. But if the organ itself is inflamed, there will be swelling as well as redness.

A morbidly pale tongue denotes deficiency in the amount of blood, or of the red corpuscles, or great prostration of the circulatory organs.

A livid tongue and livid lips show an extremely imperfect oxidation of the blood, and in *any* disease it is an unfavorable symptom in proportion to the cause and intensity.

2. *Dryness* of the tongue depends upon a deficient secretion of saliva and of mucus, and it indicates in disease derangement of the secretory organs generally. It often accompanies ulcerative inflammation of the small intestine, typhoid fever, and a general typhoid condition which sometimes occurs in the course of various diseases.

3. *Furred Tongue.*—Some persons usually, and it almost might be said naturally, have a furred tongue, and especially on rising in the morning. Although such persons may call themselves well, this is not an indication of health; and besides, when it exists, there undoubtedly is quite generally more or less trouble with the digestive organs.

But a furred tongue so generally accompanies fever, that it

may be considered a febrile symptom. When in the commencement of disease, the fur is pretty uniform in thickness all over the tongue, and of a whitish color, it usually denotes an active, and sometimes a violent fever, but usually there does not exist a malignant, hidden foe. When, however, the coating is so closely adherent to the tongue as if part of itself, and stops abruptly short of, and leaves the edges red and raw, diphtheria, or some obstinate fever which will assume a typhoid type, is generally present.

If the fur is yellow, the liver or its secretions is generally at fault.

A black tongue indicates great prostration, and seriously disordered blood.

If red points are seen in the midst of a whitish fur, giving the appearance of ripe projecting strawberry seeds, it is conclusive evidence that you have a case of scarlet fever. But this appearance does not usually exist until the disease is somewhat advanced.

The manner in which the tongue loses its fur is instructive. When the tongue becomes clean first at the end and edges, and then gradually leaves the strip of fur on the middle narrower and narrower, an unimpeded convalescence is usually indicated.

On the contrary, if the fur first leaves the middle of the tongue, and comes off in flakes, leaving a redness behind, convalescence does generally take place *some time*, but it is usually a long time about it, and while about it, the fur often recurs again and again. But occasionally following the first cleaning, the tongue becomes dry, or both dry and fissured—*then* look out for danger ahead.

4. *Loss of Taste* in the course of sickness may arise from some change of the surface of the tongue, in which case it is of little consequence. But if the loss arises from paralysis of the nerves of taste, it generally denotes brain trouble.

5. *Its Trembling.*—In the course of an acute disease, if the tongue trembles when put out of the mouth, or if the patient is unable to protrude it, brain disease, or extreme prostration, or both, are present, and it is a grave symptom.

6. If, when the tongue is protruded, its direction is decidedly towards one side, hemi- or para-plegia is usually denoted.

7. *Difficult Deglutition.*—If in the course of disease, the patient swallows with much difficulty, or has lost the power altogether, it may mean the presence of great nervous prostration, or spasm, paralysis or some affection of the throat itself.

6. The Appetite in Disease.—The appetite may be lost, perverted, or excessive. Some affections of the stomach itself, most of the acute diseases, and especially fevers, are attended by loss of appetite, or even disgust for food. Hunger indeed in fever is not usually a good symptom, until convalescence has commenced.

In grave acute diseases the patient should not be pressed to take nourishment, unless so ordered by the attending physician, for the organic vital processes which make hunger a necessity may become so perverted, and the power of digestion so arrested, that the taking of food may be and often is followed by injury rather than benefit. I hope this will be remembered, for some nurses and many mothers have the strongest conviction that if the sick one will only eat, have an appetite, he will soon get well. The proposition might better be stated, that if the patient will only get well, he will have an appetite.

In such complaints as acute indigestion, and what are called bilious attacks, food is injurious. Indeed strict abstemiousness for a short time is the most effectual *cure*.

The appetite is sometimes perverted, and voracious, in certain gastric diseases, or in cases in which perverted impressions are sent to the sensorium. Such an appetite is frequently indulged in, and it should *never* be. Also an excessive appetite may proceed from gastric irritation, rapid waste of tissue, or from derangement of the nervous system. Its most frequent occurrence is perhaps in certain forms of dyspepsia, and diabetes.

7. Thirst in Disease.—In persons who are well thirst generally arises from the physical wants of the blood. As a rule this holds good in disease. Hence the patient may drink freely of pure cold water, and in those rare cases in which such

indulgence would do harm, the physician will give directions in regard to it.

8. Obstinate Vomiting, occurring without affection of the stomach or bowels, is usually indicative of approaching eruptive disease, or disease of the brain.

9. The Capillaries.—The rate of the general capillary circulation, sufficiently exact for practical application, may be ascertained by pressing the finger for a moment upon the skin, and watching the rapidity with which the whiteness the pressure has made disappears. This ought to be practised on the well by every one, and then the comparative difference in disease can be recognized. When this circulation is very active, the skin untouched will have a *bright* redness, which will rapidly return after pressure. This means disease of physical excitement, as active sthenic fever. On the other hand, when the skin without pressure has a dark red or purple color, which slowly returns after pressure, the capillary circulation is sluggish, and is indicative of general prostration.

10. The Secretions.—The information afforded by the secretions of disease is of very great practical importance, and should be studied by all. The secretions may be increased, decreased, or perverted.

In some diseases, as the essential fevers, the action of nearly all the secerning organs may be deficient. But an *in*creased action is usually confined to one or a few organs, and in the one of few organs there is an exhaustive action, as sweating in consumption, diarrhœa in certain affections of the bowels, or diuresis in diabetes, etc. Secretions which require close attention of the nurse are those of the skin, kidneys and liver. Perspiration may not only be increased above and diminished below what health demands, but greatly changed from its normal condition. Thus again in consumption it is often greatly increased; in diabetes, diminished; and in unhealthy conditions of the blood, it is often offensive; and when there is an excess of acid in the blood, the sweat is often sour to the smell.

The aspect of healthy urine has already been noticed, and also the quantity that should be passed daily. It is a duty of the

nurse to observe all changes, and report them to the medical attendant.

The symptoms of a disordered liver, so far as its secretions are concerned, are yellow skin and tongue, and altered stools. When the latter are of a decided yellow color, and often when green, the secretion of bile is excessive; when of light clay color, deficient; when dark or black (unless colored by certain foods), some way deranged.

OTHER THINGS TO KNOW AND PRACTICE.

1. A Sunny Room and one of the largest in the house should be chosen for the sick. The sunlight should be freely admitted, unless, on account of the peculiar nature of the disease, the physician orders otherwise. The sunshine, if intensely hot, should not be permitted to strike the patient.

2. Ventilation.—Ample provisions should be made for ventilation. Pure air and the light of the sun, if friends to the hale, are angels of mercy to the ill. For the diseased exhalations from the lungs and skin of an ill person, the discharges from the bowels and kidneys, render the air more than doubly impure, while the sick one is poorly prepared either to carry or throw off the load of vitiation.

Some of the modes of ventilation already explained may be used; but it must be remembered that purity of atmosphere cannot be maintained by simply letting it in from another room, as is so often practised, unless that other room receives *its* air fresh from out-of-doors.

In securing fresh air, great care must be taken in many diseases not to expose the patient to cold draughts. Consequently if a system has not been adopted in the room for adequate ventilation without such exposure, the best use must be made of the system already there. The air must not in any event become vitiated, stagnant and loathsome. Therefore if it becomes so after using the ordinary means of ventilation, if no better way is at your control, you can cover the patient well, body, head and foot, and throw the windows open for a few minutes, care being taken to restore the air to its usual warmth before the extra

covers are removed. This process may be repeated from time to time as the occasion demands.

Another thing which has been mentioned should be remembered: that the use of any amount of perfumes, or the burning of any quantity of paper does not purify the atmosphere of an apartment. They only *hide* the filthiness.

3. The Proper Temperature for a sick-room is usually about sixty degrees during the day, and a little less during the night. But the attendant's health should also be considered, and if they have been accustomed to warmer rooms, and are cold in the temperature above named, it may be raised a little. If the nature of the disease is such as to require a different temperature, the doctor will so tell you. But *uniformity* of warmth should be maintained *always*, except the small variation between that of night and day.

4. The little table standing beside the sick person's bed should contain a glass of fresh, pure water, covered with a sauce-dish, some little delicacies which are allowed the patient, but nothing else—no food, no medicine.

5. Slop-pails, bed-pans or other vessels of the kind should be immediately emptied and washed each time after being used, and contain some disinfectant *all* the time; under ordinary circumstances keep them out of the room, except when in actual use. Nor should any of the contents of such vessels be emptied into stationary wash-basins.

6. In Sweeping the apartment, as little dust as possible should be raised. Dust should be removed from furniture, etc., by means of a damp cloth, instead of a duster.

7. A Rubber Cloth, in cases of long and severe sickness, should be spread under the sheet next to the mattress, and a folded sheet over that.

8. The Bedding, especially the sheets and the patient's clothing, should, in all acute diseases, be frequently washed, daily changed and freely aired out of the house. The too common fashion of airing articles for the bed or for the patient around the stove in the sick-room, should not be followed; the odor is both unpleasant and unwholesome.

In arranging the pillows of the bed, care must be taken to so place them that respiration will be free, and the patient comfortable as possible; not in a way to twist or bend the neck uncomfortably.

The manner of changing a very sick person's clothing is of no small consequence, since, if done awkwardly, uncomfortable and perhaps dangerous exhaustion may follow.

Having first aired and warmed every article, slip the arms out of the sleeves; then put the fresh clothes over the head, and downwards as you slip the others off. If the patient is extremely weak, the garments should be open all the way down the front, and made to button.

9. How to Bathe the Patient.—In most cases this should be performed without exposing the person to the air. After getting the water (which generally should be warm, except in some cases of burning fever), soap and towels ready, wet a cloth with the water, wring it so the water will not drip; raise the bedclothes a little with one hand, rub a small portion of the body, and quickly wipe it with the other hand. Bathe another part, wiping it as before; so on until all is bathed. After which give the whole person a brisk rubbing—first with a coarse towel, and then with the dry hand.

In cases of great prostration it is sometimes imprudent to bathe the patient all over at one time. In such cases, go over part at a time, as the patient can bear, until the whole body is bathed as above.

When a special foot bath is desired, in a case of severe illness, perform the operation thus: 1. Lay the patient on the back, with the knees drawn up. 2. Spread an oil-cloth on the bed under the knees. 3. Place the tub on the oil-cloth, and the patient's feet in the tub. 4. Cover the tub and knees with a blanket to prevent the steam from dampening the bedding. 5. Let the feet remain in the tub from five to twenty minutes, according to the effect of the bath on the patient's feelings. 6. When the feet are taken from the bath, wipe them quickly and wrap them in hot flannels.

10. How to Move the Patient About.—In cases of severe

illness it is very desirable to have two beds in the room—one for night and the other for day. The patient can best be moved from one bed to the other by two or four persons—each taking one or two corners of the sheet the sick one is on; after the transfer is accomplished, the old sheet may be removed.

A patient who is much prostrated by disease should never be requested nor allowed to help himself or herself, nor use any exertion whatever. When it is necessary, for example, to move such a weakling up in bed (having slipped down), the nurse is to pass her arms under the patient's arms, and clasp her hands over the chest, while another attendant should pass her arms under the patient's knees, and the desired position can readily be obtained.

If the persons ill are strong enough to do so, they may clasp their hands around the neck of the attendant when it is necessary to move them.

11. Bed-Sores.—These are exceedingly annoying, and sometimes very serious in their results, and should, if possible, be prevented. It is generally possible, if proper attention and care are used. The parts on which pressure comes should be daily sponged with water and spirit; the clothing under the patient kept clean, dry and smooth, and if at any time redness appears, a little tannin and solution carbolic acid are to be mixed with the water and spirit, the patient so placed as to relieve the pressure on the threatened parts, and air-cushions properly used.

12. Of Food.—In most cases of illness, milk, oatmeal porridge with milk, and other milk preparations are proper nutriments; at the advent of prostration, beef-tea and other stimulating articles are demanded. The kinds and amount of food required in any given case, and at the different stages of the case, the physician will direct. It belongs to the nurse to prepare all nourishment so that it will be wholesome and agreeable to the taste; to keep no food "laying around loose;" to prepare all nourishment quickly and nicely when wanted, and serve it on a tray covered with a clean napkin; to see that the plates, cup, spoons, and hands that handle them are scrupulously clean, and lastly, to see that she (the nurse) does not taste of the food from

the same spoon or fork with which she expects the sick person to eat. If you do not observe all these points sedulously, wonder not if the patient turns with disgust from both food and nurse.

Let the diet be varied as much as the case will allow, but in *every* case the physician should say what is allowable.

In most cases of sickness it is advisable to give nourishment frequently, little at a time, and at stated periods, especially so if the patient is laboring under great prostration. If such prostration does not exist, it is often better not to disturb the sleep, for sleep may be more beneficial than food. In all these things the advice of the attending physician should be asked and followed.

It is almost always best in every case to give nourishment the last thing before the patient goes to sleep at night and the first thing after awakening in the morning.

If perfect regularity in the times at which nourishment is to be given is not demanded; if the appetite of the patient is more or less capricious, it is sometimes the better way to learn by observation the hours at which nourishment is most relished, and then anticipate his hunger or willingness to eat by quietly getting food ready.

When ready prop the patient up in bed and put a clean napkin over the shoulders. But in cases of great prostration great care must be taken that the head be not raised too high, lest fainting be produced.

It often happens that the patients do not relish beef-tea when greatly in need of it. In such cases some addition should be made to it, such as milk, slightly thickened with flour, flavored with pieces of celery, and boiled together for a few minutes and the celery then taken out. This is palatable, nourishing, and an excellent stimulating food.

13. Medicines.—The patient should never see but a single dose of medicine at one time. If under the gaze of the patient a chaotic array of vials, bottles, and cups is strewn over the table at the bedside, and perhaps among the various viands, the patient will probably come to loathe all medicine, however pleasant to the taste.

14. Whispering, etc.—Everything about the patient's room should be kept perfectly clean and in perfect order. All annoying sights and sounds avoided. Of all annoying sounds there can be few more objectionable than the almost incessant whispering, which is so fashionable in the sick-room. The natural lowered voice is much to be preferred. Whispers and mysteries are not only calculated to awaken the sleeping patient, but to awaken as well all the dismal fancies and forebodings of the mind.

15. Evening's Duties.—Everything in the early evening should be made ready for the night, so the patient will not be unnecessarily disturbed. One caution is here needed: many who use kerosene lamps are in the habit of turning down the wick to make less light. This should never be, for much unconsumed gas escapes into the room to the detriment of the person sick. Let the full blaze burn, though well shaded, from the patient's eyes.

16. What to Observe when the Patient Sleeps.—Under ordinary circumstances the patient should not be frequently awakened, through fear that the sleep will be carried to exhaustion. Much and quiet repose wonderfully retards the weakening and disintegrating effects of disease, and may snatch victory from threatening death.

One seriously sick should, however, be carefully watched while asleep. The chief things to watch are the color of the face, the manner of the breathing, and from time to time the quality of the pulse. If at any time the face is pale, the breathing or pulse abnormal, showing prostration, the patient should immediately be aroused and nourishment, with stimulants, given and repeated every few minutes until all goes on well again. This simple precaution will perhaps save the life. In the early morning these symptoms are more likely to arise than at other hours; therefore the *responsible* nurse should always be present during those hours. If from the other symptoms the nurse is in doubt whether or not stimulants and stimulating nourishment are demanded, let her give them without delay, should the feet or hands be cold, and continue to give them till the natural warmth is restored; let her aid these restoratives

with hot flannels and jugs of hot water placed around the cold members. The temperature of the room should also be kept a little higher than usual during the same hours, or at any other hour if symptoms of chill or sinking arise.

17. DURING THE ABSENCE OF THE DOCTOR.—What the nurse should observe and write down and report to him at each visit is chiefly as follows: 1. How the temperature as shown by the thermometer in the axilla (armpit) has been at different hours of the day. 2. How the pulse has ranged. 3. The secretions of the skin, as to the quantity, smell, etc. 4. How many passages from the bowels and appearance of same. 5. The same of the urine. 6. How the patient has relished food, how much taken, and what. 7. Has there been thirst, and to what extent. 8. Has there been vomiting or nausea. 9. The amount and quality of sleep. 10. Have the medicines agreed with patient and their perceptible effect.

18. When a very sick person is left for a time in another's care, the nurse cannot be too specific in her statement as to all the duties of the temporary attendant. I have known many serious mistakes made by an oversight here.

19. THE LITTLE ATTENTIONS.—While an over-officiousness of the nurse is *bad*, there are many little attentions which, if dexterous, she may give that will add much of comfort and rest to the sufferer; the mention of one must do for all: a cold pillow placed under the head of one suffering from pneumonia may cause many hours of vexatious cough. To *warm* the pillow first seems a very little thing, yet it may save the cough and give the patient quiet repose. Surely good judgment, presence of mind, eternal vigilance, the most delicate dexterity, are essential qualities to those who have the care of the sick.

20. A CALM SELF-CONTROL is imperatively required of every person in the presence of the sick, for when the room resounds with the sobs, and moans, and chokes, and cries of any present, what disastrous results may not be produced on the poor suffering one!

21. CHEERFULNESS.—The nurse and all others about a person ill ought to be cheerful, though that kind of cheerfulness which

may be taken for heartlessness should not be felt and much less exhibited. The words and actions of the attendants should carry interest and sympathy and love with them. If a nurse has no interest, sympathy and love in her soul, let her forever absent herself from the sick-room.

22. KEEP THE PATIENT'S COURAGE UP is another duty belonging to all who are about the sick, and especially to the physician and nurse. This cannot be done by relating news about such and such and such persons dying of the same disease with which this sick friend is afflicted, or by any other tales of suffering and of woe.

23. VISITORS AND INTERMEDDLERS.—It may be laid down as a rule with very few exceptions, that many callers in severe cases of sickness are detrimental. If an amiable caller may be detrimental, an intermeddler is always *pernicious*. It is quite too common for certain of the neighbors to visit the sick with their tongues on fire, and on mischief bent. These shallow performers go on their mission under various forms and guises, though one or two examples must be the finger pointing to all. The first often shows a less venomous disposition behind the act; sometimes, it may be, even good is meant, but the *evil* is none the less for all that.

First Example. Many popular nostrums exist, for all human ills. Now the kind of persons we refer to, for all they are so wise (?) are exceedingly credulous, and easily duped, and as a rule they have been duped concerning some one or more patent medicine. When he or she is aware that one is ill of some disease that comes under the range of her guns, the patient is indeed unfortunate, for he is not only a victim of the disease, but must also be victimized by his would-be friends. If for instance he has been ill for two weeks with rheumatism or some other complaint, of a class, vulnerable to the touch of the potent wand in view, the neighbor arrives all in arms, and exclaims, "Why don't the doctor break it up?" "He wants to run up a big bill, and is torturing you an age to do it! Why, you remember how bad Mr. J. was?" "Yes, and the 'Empiric Elixir' cured him so quick!" "Now, my dear friend, I have

brought you a bottle of it, and you can continue to take the doctor's medicines and let him believe he cured you." "Mrs. J. will hand me one dollar and a half, and I will pay the druggist for it as I go home." How kind and tender of the feelings of the man who is keeping your "dear friend" under prolonged tortures of rheumatism for the sole purpose of "running up a bill!" Well the mediatorial "Empiric Elixir" is faithfully administered, but passing strange, alas! for, for some cause too mysteriously profound for this philanthropist ever to fathom, the splendid miracle expected is not performed!

The following shows how easily some are deceived, and it is submitted as a warning to others. A case of scarlet fever once came under the writer's observation, from which the attending physician in a day after taking the charge of the patient was dismissed. The reason of such dismissal was as follows: a neighbor averred that *he* could cure the patient in twelve hours. Now the physician had said the child must be ill for a week or more, and therefore it was plain that the neighbor, and not the doctor, was the man to treat that child. He took the case, and succeeded in killing the poor little patient in three times twelve hours. Nobody responsible for the blunder and the death? Shall a man or woman be excused because of ignorance, when he *never will* learn—not wisdom, but a little common sense? Such unsophisticated kindnesses are often exhibited in various ways, and from various motives; in whatever way or from whatever motive exhibited, they are pernicious, and to be most strongly condemned. The attending physician very likely understands the pathology and treatment of his cases quite as well as persons who really know nothing of the structure of the human system, the nature of disease, nor of the indications of treatment. If this be so, then the manifest duty of the nurse and friends of the sick is strictly to do as the physician in attendance directs, in nourishment, medicine and all else; to exercise every vigilance; to inform the doctor of all changes in the symptoms, which they can observe by their closest watching, remembering that when a physician is in charge of the case their responsibilities extend not into the domains of therapeutics.

It may be well to mention one other class of intermeddlers. They, of that class, proceed to business in their own characteristic manner, thus: "What doctor do you have?" they ask. "Dr. C.," it is answered. Then the retort comes, "I wouldn't have Dr. C. to attend a sick cat—why don't you have Dr. R.?" It is answered, "Why we thought Dr. C. was a good physician." The first replies, "Good physician! he was never known to break a case of typhoid fever, and Dr. R. will break almost every one." Encouraging music to the ears of one prostrated by a grave illness! Now it quite generally happens in such cases that the attending physician is as successful in his practice as is he who is the subject of so high laudations from these mischief-makers. Whatever the motives of the latter are, their words are certainly not only an uncalled-for insult to the medical attendant, but harmful to the patient's recovery. Such persons are an inveterate plague, and if the plague has not numerous representatives, what is lacking in numbers is fully made up in industry and impudence. It is well that all parents, and especially young married couples, learn to distinguish and to spurn mischief-makers, come they in whatever guise, and prepare to meet them as enemies of their peace, and as scourges that whip out the lives of those grasped by disease.

24. Following the Doctor's Directions.—It may seem quite unnecessary to ask those who wait on the sick to follow the directions of the attending physician; for if the nursing is done by members of the patient's family, they might well be expected to be prompted by affection to do so; and if a hired nurse is employed, it is her *business* to carry out the orders of the doctor. But *practice* often varies vastly from *theory*. The members of families are sometimes forgetful, and if not forgetful, incompetent in that they do not know the duties of a nurse; or if not either of these, but *good* nurses, then it sometimes happens that an incorrigible knowing one is the "fly that spoils the ointment." Professional nurses often have these same faults, and are *paid* for their mischief. It is the duty of all who care for the sick to intelligently do what they are directed, and forgetting self, pay their undivided attention to the patient; if anything

goes wrong or seems to go wrong, they should inform the doctor immediately, instead of plunging into acts which they know not are right or wrong.

The nurse should also learn to describe the symptoms clearly, and to ask the physician questions to the point. Some innocently go on with an almost endless description of a case, and when she finishes—or is broken off, for an occasional one will not finish—the doctor knows as little about the case as when the history was commenced. It is not of advantage nor a part of wisdom for one who nurses the sick to presume in her ignorance of such matters to criticise the doctor's treatment of the case. The nurse, as well as the physician, better give the patient the advantage of what they *know*, instead of what they do not know.

25. CONVALESCENCE.—During convalescence after severe illness, great care, judgment and often patience, are wanted on the part of the nurse. The greatest cautions of all are required in reference to taking cold and to food. It must be remembered that on the account of the patient's weakness, low vitality, and having been for some time unused to being out of a warm bed, he is extremely susceptible to the influence of cold air, and takes cold if exposed. The greatest care, therefore, must be used that no exposure occurs, which easily may, especially during the first few times of sitting up. To prevent it, a warm blanket should be spread over an easy-chair, before the patient is ready to get out of bed, and immediately on his sitting down, wrapped around the whole person, feet and all, evenly and perfectly.

The appetite is sometimes poor or capricious; at other times entirely voracious. In the former condition, it must be coaxed and sharpened by serving dainty but innocent dishes, acid vegetable juices, and perhaps some appetizer in the form of medicine. On the other hand, when hunger is so imperious that it would be dangerous, and might be death to appease it, the patient must be controlled. For want of a controlling power, I have seen many relapses and a few deaths. The patient often is not master of his own actions, not only in regard to eating, but many other matters. The nurse must exercise with him a great

deal of forbearance, as well as firmness. If fickle-minded, cross or exacting, the nurse should be predetermined not to take offence at anything the patient does or *can* say. Self-control will sometimes be hard, but to assist you in retaining that essential, keep in constant remembrance that sickness has so affected the patient's nervous system as to make him irresponsible for his words and actions. Instead of flying into ill humor or a passion under even the most trying circumstances, it is decidedly the attendant's business to do all she can to make the patient happy, or at least as little miserable as she can. Let her, for instance, present to him some beautiful flowers; admit a friend of his whenever it is safe to do so; give all the fresh air and sunlight as is prudent; make little changes in the room's furniture, etc., and let him be conscious that she does these kindnesses for his good and comfort and joy, and she will have gained a friend, and the consolation of well-doing will be to her a munificent reward.

26. FOR THE NURSE'S OWN PERSONAL SAFETY they should take regular, substantial, wholesome meals, and, so far as circumstances will permit, obey sanitary laws in all things, being absolutely fearless of taking disease.

They should dress neatly, and in colors not easily soiled, not forgetting personal cleanliness and chastity of words and of life. Their deportment, in every way, quiet, agreeable, persevering, firm, steady-nerved, sympathetic, faithful; constantly inspiring the patient with unyielding hope, confidence and faith in recovery. Let all the helpers labor hand in hand, heart in heart, with the attending physician, and if in due time the disease be conquered and the sufferer saved, let honest, diligent, efficient efforts, the healing force of nature, and God above all, receive the gratitude and praise.

WHAT TO OBSERVE AND DO IN SPECIAL CASES OF ILLNESS.

The parent's first object, evidently, is maintenance of the uninterrupted good health of all the family. To attain that, sanitary laws must be known and obeyed, for the laws which govern our physical functions are as relentless as immutable. If, through ignorance or disobedience of those laws, one becomes sick, the

next purpose will be to save from continued or "runs of sickness;" failing in that, the question is important, How shall the sick one be nursed?

The subjects relating to the above have been treated of, and here it is only necessary to give a few cases in practice, which may form critera for the rest.

What is to be done if one member of a family is out of usual health, or ill, but not sufficiently so to require a physician's immediate attention? Certainly, not put on a long face, and call the indisposition *fate;* but call it what it is—the penalty of disobedience, and at once go to work and, if possible, get the patient again in harmony with the forces which govern the physical organism in health. But it is not the way of wisdom to depend on a patent medicine for the restoration. It may be well here to inquire somewhat of the bearing such medicines have on the health of the people.

Physicians are often accused of selfish motives when they wage war against proprietary medicines. Is that accusation founded on fact? It is well known that physicians take a deeper interest in all sanitary improvements and sanitary reforms than any other class of men. Does that interest arise from selfish motives? The desire to keep the people well? Just as much as are their protests against the indiscriminate use of the nostrums in question. With reference to the latter, doctors, from a mere *self*-interest, have very little cause to complain, for the proprietary medicines, I doubt not, cause in the long run more sickness than they cure.

Let us reason together. First, let it be understood that all medicines—proprietary or not—are more or less injurious to every person in health: that in sickness, if used with sufficient precision to meet the case, they are useful, but useful because they are less an evil than disease. The justification for the use of any medicine consists in this, that it is adapted not only to certain diseases, but to certain indications of the disease as manifested in different persons, and at the different stages of the case. The hand of science, combined with art and experience, is alone capable of making the adaptation. For how can one who has

no knowledge of the human system and of the science of medicine discern the nice, but essential indications of treatment? The answer will be obvious by extending the chain of reasoning a little further. It is found through both science and experience that a medicine which is capable of doing much good in one stage of any disease is capable also of producing much harm in another; that the dose must vary greatly with different persons of the same age, and with the same person under different conditions; that no two cases of illness of the same name can be properly treated precisely alike. Can any man or any woman, however uneducated and unskilled, thus discern the indications of treatment—vary the medicine and dose to meet any condition that may arise during either an acute or chronic ailment? Or does all this demand an expert examination and skilled discernment? Besides, no one medicine is endowed with the virtues requisite to meet all diseases of the same name in *any* stage, much less in all the stages of any disease. How is one to know even the *stage* of disease in which any patent medicine can be effectual, since it is mostly claimed that they will cure, irrespective of stages or discriminations, the diseases for which they are recommended. They are usually recommended for a number too numerous to mention.

Many proprietary medicines which have been analyzed have been found to possess no value whatever. A few are valuable, but in their administration there is needed a strict, scientific adaptation to the case under treatment. Some of them are chiefly composed of poor alcoholic liquors, and make many intemperate. Others so act upon the coatings of the stomach and bowels as to make many dyspeptics or chronic inflammations. Others on the nervous system in such a manner as to be the mother of many nervous diseases. A large number, and especially of the soothing and teething syrups, contain opium in some form, which soothe multitudes of children into affections of the brain or of its membranes.

If one of a family becomes ill, but not sufficiently so to require the immediate attention of the doctor, he should practise for a day or two strict abstemiousness, and perfect rest of body

and mind. Sleep all possible, rising late in the morning, and take a good bathing and a thorough rubbing. If the bowels are constipated, take a mild cathartic. If feverish, take a few doses of aconite, and if the throat is sore, or you have cold in the head, take belladonna in alternation with the aconite. Of either in water three drops for each dose, as follows: the tincture one part, alcohol nine parts; mix. Children less, according to the age. If there is reason to suppose that your indisposition is more or less malarial, take a three-grain dose of quinine every morning and evening; or if there is a distinct intermission in the fever, take fifteen grains of quinine in divided doses during a single intermission. If not better in two or three days, send for your family physician. *Family* physician, for heads of families should choose a physician in whom they can repose confidence through victory or defeat. They should cling to him, and if he is a humane man, yourself and family will become dear to him, and he will have a loving interest in you and them, to which mere money is not akin. Not so, however, if you are in the habit of changing your medical attendant from time to time. Besides, it is your greatest safety to cling to one physician, because he learns the peculiarities of each member's constitution, and can hence adapt medicine to each better than can possibly a fresh doctor of the same ability. The new physician has this to learn, and while learning it the patient may be in peril.

When one is taken really ill, an investigation of the *cause* of the illness should immediately be made—not so much perhaps on the patient's account as that of the rest of the family, for it often happens that when one member gets sick, others follow. Hence I repeat, if one of a family is sick, investigate the cause of the sickness. For example, if the cellar is damp, dry it; or if foul, remove the filth. If your drinking water is contaminated by organic material, procure water that is pure. If the house-drainage is defective, make it perfect. If there exists any uncleanliness or foul odor in or about the house, remove it. If the family or any members of it are in the habit of physical or mental over-exertion or under-exertion, you know the remedy. If the food or clothing has been improper, make it proper. If there

is want of personal cleanliness, you again know the remedy. If there is an habitual mental worry or a general and perpetual hubbub, let a tranquil, cheerful surrounding remove it. Remember always that for every case of sickness there is somewhere an adequate cause that has produced it.

HOW TO CARE FOR A CASE OF PNEUMONIA.

This is inflammation of the substance of the lungs, and is, in some climates, a very frequent, and in all climates a very serious disease.

It usually commences, like most of the *essential* fevers, with a chill, and the chill is generally preceded by the symptoms of a cold.

Its onset is sudden; the temperature of the patient rises rapidly, often reaching on the first day 100° to 105°. A decided symptom is shortness, or other difficulty of respiration. It is an affection which reaches its climax rapidly, and a physician should see the patient without loss of time.

The Nursing.—No disease perhaps needs greater care in regard to some things than pneumonia. One important thing is the temperature of the room. It should be kept at about 65° and *perfectly* uniform night and day. The patient should not in any manner be exposed to a draught of cold air; should not be uncovered. When given a bath the work should be performed without the least exposure, and the water should be warm. Keep the chest, feet and legs especially warm. If the doctor orders hot applications to the chest, let there be two of the kind ordered, and have one always ready, and put it on immediately on taking the other off. When such applications are no longer required put on several thicknesses of dry flannel cloths—thus sustaining an equable warmth from the first of the illness to the last. On the advent of convalescence, the flannels should be removed, one thickness daily. These matters are very important, and the safety of the patient in a great degree will depend on the manner in which they are performed.

What to Notice and Report to the Physician.—The manner in which the patient breathes, and the number of respi-

rations per minute, should from time to time be observed and reported; the quantity and character of the expectoration. This is generally neglected, to the annoyance of the physician. The continuance of the disease, when running an ordinary course, is from a week to ten days, and the most critical period is usually near the end. The case must be closely watched during the last stage of the disease, for the patient may sink and unexpectedly slip out of reach of your care. Any tendency to sinking and the time must be reported to the doctor. In anticipation of such an event stimulants and bracing medicines should be at hand and administered as the medical attendant directs.

During a violent course of pneumonia the strength is rapidly reduced. Therefore the patient may require early support in the way of both medicine and nourishment—milk at first, milk and beef-tea afterwards, and sometimes milk-punch towards the last.

The head and shoulders throughout the disease should be well raised, and absolute quietness of mind, body and tongue of the sick person insisted upon. Every excitation of the mind and every word spoken sends the blood rushing through the lungs to the harm of the patient.

TYPHOID FEVER.

The premonitory symptoms of typhoid fever are likely to be continued for some time before the disease is fairly established. These first symptoms are such as the following: restlessness at night, giddiness, pain in different parts of the body, headache, a sensation of feverishness, more or less diarrhœa in some cases, and a feeling of a general indisposition. All the above symptoms are not always present, but such is the general trend of the approaching disease. Succeeding the premonitory symptoms a chill, or at least chilly sensations, announce the arrival of the unwelcome guest, who has very likely come to make a long visit. Some physicians pride themselves on almost always "breaking" at once typhoid fever. But the fact is they pronounce most fevers typhoid, either through ignorance or for the sake of gaining a reputation without deserving it. The best

authors and the greatest physicians teach that true typhoid fever cannot be cut short; and yet we mostly entertain the pleasant conviction that we have sometimes arrested this disease—*jugulated* it. We hope this is true, but in the great proportion of cases we are undoubtedly mistaken in our diagnosis. We can cure, often quickly, remittent and intermittent fever; but doctors may as well frankly admit in the present state of their knowledge that if they conduct true typhoid fever to a favorable termination, with the assistance of good nursing, they do well—to jugulate it is very like jugulating small-pox.

After the chill the temperature indicated by the thermometer rises; but unlike pneumonia and most other acute fevers it rises slowly.

The Peculiarities of the Nursing.

1. What the Nurse is to Observe and Report.—The number and appearance of the evacuations from the bowels; the appearance and quantity of the urine, and if there is difficulty in voiding it; the frequency and the amount of nourishment taken, and whether it has agreed with the stomach. Has the patient vomited? Has any medicine disagreed? How long has the patient slept? Has he been delirious? If so, to what extent? How has the pulse been, and has it varied much in its frequency or quality? The morning, noon, and evening temperature as indicated by the thermometer.

2. The Special Care.—Besides obeying the general rules given in the preceding pages, the nurse should especially see to the following: that the patient is twice daily bathed and nicely rubbed. A black crust has a tendency to form on the teeth and lips. It is desirable to prevent this, and it usually can be done by carefully washing the parts several times a day with a weak solution of chlorate of potash and glycerine—chlorate of potash, ten grains; water, two ounces; dissolve, and then add glycerine one ounce; mix.

Not only should the patient's person be kept scrupulously clean, but so should the clothing, bedding, and everything in the apartment. The patient's clothing and the sheets on the bed should be changed at least once every day.

The Evacuations.—The evacuations are very noxious. Hence the noxious properties must be destroyed as completely and as quickly as possible. To destroy them a disinfectant, as a strong solution of carbolic acid, chloralum, or sulphate of iron, must be put into the bed-pan or vessel previously to its being used each time, and the vessel immediately emptied and washed with a disinfectant. On account of the semi-unconscious state in which a typhoid fever patient is sometimes, the evacuations by such are often involuntary. The bed should, therefore, be thus prepared for such an unpleasant emergency. Over the mattress place a rubber cloth, over that a sheet, and over the sheet some smoothly folded cloths. If the cloths or any part of the person become soiled, the one should immediately be removed and the other carefully washed.

Ventilation.—This is one of those diseases in which, for the good of the patient and the patient's attendants, the ventilation should be ample. Keeping the person ill out of a draught, let the air be continually changing. The proper temperature to keep the room is about 65°.

Food.—The same kinds of nourishment mentioned as appropriate in pneumonia are no less so in typhoid fever. Ask the doctor as to the frequency and amount to be given, as this should vary in different cases.

Drink.—Cold water, lemonade, toast-water, barley-water generally may be allowed *ad libitum*. Tea, moderately. In relation to drink, it must be remembered that the person's indifference and stupidity is sometimes so marked in this disease, that he will not call for water; when most certainly in every case, and in every stage of it, he has pressing need of refreshing drink oft repeated. Let this never be neglected.

Delirium.—If the patient is at all delirious, he should not for a moment be left alone; for persons sick with this disease are often apt to get out of the house. One of my patients, in the absence of the nurse, jumped out of the window, and ran until overcome by exhaustion. He was brought back only to die in a few hours from prostration which the exercise produced, and for which he was so totally unprepared. Another escaped out

of the house, and could not be overtaken until he had run half a mile from home, where he sank down, to be carried back dead.

Delirium is a frequent symptom, and especially a dangerous one when it takes the form of a low muttering, picking at the bed-clothes, reaching of the hands, as if after some object which does not exist.

The nurse should keep the patient quiet as possible, and all around him quiet; and during the whole course of the disease, all the watchfulness and all the judgment at her command is required. If at any time any unfavorable symptom arises, as exhaustive diarrhœa, difficulty of breathing, great tenderness or pain in the bowels, the physician should immediately be informed.

Convalescence.—During convalescence the appetite is sometimes unbounded; and if great care is not taken on the part of the attendant, the patient will make his food the weapon of his death. During the convalescence of one of the sickest women I ever saw, contrary to my directions, and without my knowledge, she sat one evening at table with the family, and ate a hearty meal of warm biscuits, butter and cheese. When she had finished her meal, she said: "Well, I've got all I want for once." And it proved (and it is not strange) that she had got all she wanted for all time, as in a few hours she was dead. She might perhaps have been saved could vomiting have been provoked, but she sank so quietly that her condition was not realized until it was too late.

Fluid nourishment, and that alone, should, therefore, still be given, little and often, until the doctor allows other food. One cannot be too strict about this. And even then, if a slight diarrhœa, or nausea, indicating indigestion, should occur, notify the physician at once.

The patient should not sit up too soon, nor go out until considerable strength is gained, for many relapses result from these indiscretions.

CHOLERA MORBUS.

The usual causes of this painful disease are improper food, impure drinking-water combined with intense summer heat, or

hot days succeeded by cold nights. These attacks may usually be prevented by using proper care during the cholera morbus season, regarding appropriate food, sufficient clothing of evenings, and sufficient bedding of cold nights after hot days.

The disease is characterized by agonizing pain in the bowels, cramps in the limbs, and coldness, faintness, vomiting and purging of liquid material and bile, and a tendency to collapse.

This disease does not often prove fatal, if proper attention is given to the treatment; and yet it is attended by suffering so excruciating that it is a simple act of humanity to have a physician in immediate attendance. There should, however, be something done before the arrival of the doctor, though the vomiting and purging should not be immediately checked, since this is the method of nature to remove the direct cause which produces these effects. Though nature quite generally in this disease overdoes itself, and art must be called to the rescue. The physician will generally be present sufficiently soon to attend to this, but if he is not, use the following: sub-nitrate of bismuth, forty grains; pulv. opium, one and a half grains; mix; divide into four doses, and give a dose every hour and a half in alternation with homœopathic tincture belladonna, one part; alcohol, nine parts; mix; dose, three drops. In children, the dose must be diminished according to age; in so far as the opium is concerned, it should be diminished far more than in proportion to the age, since many children are peculiarly susceptible to the influence of opiates of all kinds.

There must be action on the part of the nurse, before internal medicines are resorted to. When the symptoms of the disease first appear, dip two slices of bread in hot vinegar, sprinkle thick with powdered mustard, and put one slice over the stomach and the other over the bowels. Rub feet and legs briskly, and place jugs of hot water around them. At all events the patient must be kept warm. Therefore if other means are not sufficient to do it, they must be aided by brandy or whiskey sling, or phosphorus; and lest the patient sink, keep the body flat.

CONVALESCENCE.—The patient generally and the digestive

organs especially are left quite prostrated. Hence while the food should be nourishing, it *must* be *easy* to digest. Milk, raw eggs, beef-tea, or other animal broths, will satisfy without a swift return to solid food.

SIMPLE DIARRHŒA.

The most common cause of this too common disorder in the young or old is improper food, over-eating, or some other error diet-ward. There may, of course, be other causes associated with this.

Nursing.—Let the affected person go to bed and stay there for twenty-four hours, drinking a little tea, or crust coffee from time to time, but eating nothing. He will not starve, but when his twenty-four hours are up, his digestive organs will have rested, and the diarrhœa will usually have passed away. Then let the patient have a little boiled milk slightly thickened with wheat or barley flour, and gradually work up to his ordinary food, if his ordinary food has been what it should be.

Or, if the complaint continues notwithstanding the above, give a few doses of the following: prepared chalk, powdered, two drachms; laudanum, thirty drops; water, six teaspoonfuls; mix. Dose for an adult, a teaspoonful every two, three, or six hours, according to the severity of the case. Shake well before using, and if a cure is not gained in a day more, consult your physician.

DYSENTERY.

Dysentery is inflammation of the mucous coat of the large intestines; is attended by frequent discharges, but they consist of blood, or viscid mucus, or both, and not of fæces proper, as in diarrhœa. Therefore dysentery may be, and usually is, attended by obstinate constipation. The object of treatment is not to *stop* the discharges, but to cure the inflammation upon which they depend. This is a disease which requires the attention of a physician, but if a physician cannot well be had, the inflammation may usually be subdued by the following: hydrarg. cum creta, one grain; sugar milk, nine grains; mix, and rub together for fifteen minutes. Dose for an adult, one

grain of the mixture every three hours, alternated with tincture belladonna, one part; alcohol, nine parts; mix. Dose, three drops.

Hot applications are to be kept on the bowels; the patient kept constantly and quietly in bed until convalescence is far advanced. During the whole course of the disease, a disinfectant is to be put into the bed-pan before each evacuation, and the vessel emptied immediately, and washed thoroughly. It should also always be warmed before the patient uses it. Strict attention should be had to the ventilation. The patient's clothing and the bed's sheets should be daily changed. Let the motto be, entire cleanliness in every way.

PERITONITIS.

This is inflammation of the surrounding membrane of the bowels called the peritoneum, and is characterized by severe and often agonizing pain, which is greatly increased on pressure on the bowels, or from any movement of the person. The patient usually lies on the back, the knees drawn up, and is very careful not to move, not even to speak. Fever is present, yet the face is sometimes pallid, and the surface of the body rather cool.

This is not only an exceedingly painful disease, but as dangerous as painful, often quickly so. Therefore if one of a family has abdominal pain with tenderness on pressure, a physician cannot see the patient too speedily.

THE PECULIARITIES OF THE NURSING.—The air in the apartment should be kept pure, and yet *entirely* free from cold currents. The temperature, about 70°. If hot or cold applications are ordered for the bowels, the utmost care should be used that they are sufficiently covered with dry cloths to preserve the patient's clothing from wetness, or even dampness. This should by all means be borne in mind lest the applications do harm instead of good. To ensure security against getting the patient's clothing wet, I have often and with much satisfaction had two flannel bags made large enough to cover the whole abdomen of the patient, and hard, dry hops put into each bag; then steam one of the bags in a steamer over boiling

water; apply it to the patient; steam the other bag, take off the first, apply the hot one; steam the first, and apply it, and so continue the steaming and the changing; the changing should be done quickly, without exposing the patient to the air.

The nourishment should consist entirely of fluids, and of these milk is much to be preferred. In this disease, sudden prostration and sinking may occur. There is great danger of it as well as *in* it, when it does occur; therefore the patient should be very closely watched in this, and if at any time the hands and feet become cold, the face pale, or the pulse weak, stimulants and beef-tea should be given with a free hand till reaction takes place. Warm the patient up by all means and quickly. *Really* the nurse should be so well qualified as to know that sinking is impending before it comes, and anticipate it by making the room a little warmer, by placing a jug of hot water to the feet, and by the administration of little doses of stimulant; and medicine should be left for the same purpose. These things you may be assured are of no little consequence, for if the nurse cannot foretell the incipient symptoms of approaching collapse, and she permits it to come, there may be no revival of the faltering power.

One word in regard to alcoholic stimulants. It has been the fashion of late to give, almost to rely on, them, in the last stages of all diseases, and in enormous doses, too—abused rather than used. The fact is, and physicians will learn it to be a fact, that the great majority of most diseases may be conducted to a favorable conclusion as successfully, safely and quickly without alcoholic liquors as with them. Yet there are sometimes cases of almost all diseases in which they are very valuable—so valuable as to be indispensable, and *often* so in the affection under consideration. But certainly they ought not to be used indiscriminately, or as a matter of routine, and when given, small doses, as from a half to two tablespoonfuls, will, I am confident, produce better results than over-large doses, for the simple reason that small quantities always stimulate, while large quantities often produce a sedative effect, as is witnessed every day with intemperate men.

CONVALESCENCE—THE PECULIARITIES OF MANAGEMENT.—An exclusive fluid nourishment is as essential until convalescence is far advanced, as during the course of the disease; and at last, when changes *are* made, great caution and judgment must be used in regard to them.

A flannel bandage should, for some weeks, be worn around the abdomen. Great caution must be used to guard the patient against taking cold, or too early or too much physical exercise.

GASTRITIS.

Gastritis is inflammation of the mucous membrane of the stomach. The symptoms are gastric pain, vomiting, paleness of the face, feebleness of pulse, coldness of the extremities, and sensation of faintness.

CAUSES.—Irritant poisons, improper eating, especially when the system is feeble from disease or other cause.

THE PECULIARITIES OF NURSING.—The patient should be kept at absolute rest in bed. Cold water may be allowed if the stomach retains it. But the greatest care and judgment must be used in regard to nourishment, for the digestive powers in this affection are almost totally lost. Therefore, if more food is given than can be digested, it ferments and increases the pain, vomiting, and the actual severity of the disease. Several cases have come under my observation, in which the nurse fed the patient unaccountably much and often, and the patient incessantly ejected it from the stomach. In such cases I have generally commenced by giving every hour a single teaspoonful of milk, or a mixture of one part lime water to ten parts of milk, and very gradually and carefully increasing the doses as the stomach would bear. But unfortunately it is not every nurse who will follow the doctor's directions in this respect. She reasons that the patient will starve on such an amount of nourishment, and so she feeds away with a liberal hand; the patient the while swallows all, and then faithfully gives it back to the nurse before the stomach even warms it. Starve on a teaspoonful of milk every hour? It is surely not an ample support, but the patient will not starve. Can you not understand that it is not the

amount that one eats, but the amount that one digests and assimilates that nourishes? In the nurse's way much is given and ejected, and the disease aggravated, but the patient not nourished. In my way a little is taken which is usually not vomited, but does the patient good. It need not take a long course of reasoning to convince which mode is best. During convalescence, also, great care in nourishment must be continued. To assist the small doses of milk, the same and beef-tea may be given by injection.

CEREBRAL APOPLEXY.

This disease is usually caused by an effusion of blood into the brain, and is generally fatal, or else steals away good health and vigor, both physical and mental.

Every one ought to find out whether he has any hereditary or personal physical predisposition to apoplexy; if he has, he should confine himself to simple diet, take open-air exercise daily, but not violent nor too long continued; let his mental activity be moderate; keep his head cool; his hair cut short; mentally cool by preserving an even temper, free from passion and intense emotion, and entirely abstemious as regards alcoholic stimulants. The persistent use of such means will probably save from an attack.

Symptoms.—The attack is sometimes sudden as the lightning stroke; at other times preceded by certain premonitory symptoms, as pain in the head, dizziness, confusion of thought from time to time. The onset so terrible is marked by the patient falling to the ground, by a flushed face, noisy breathing, deep stupor, unconsciousness. The sober man appears as if dead-drunk.

The Nursing.—The doctor will be sent for immediately. But before his arrival, raise the patient's head, shoulders and body to a half-sitting position, loosen his collar, apply cold water to his head, wrap hot flannel cloths around, and place a jug of hot water to his limbs if they are cold; keep the room well ventilated. On the arrival of the physician follow his directions.

The patient may die in the attack, but if he does not, the diet,

for a long time, must be entirely unstimulating; he must not be in the least excited in any way; indeed, the utmost quietness must prevail.

Electricity (galvanic current) will nearly always not only prevent an attack of apoplexy, but make the person safe for a long time to come; but it *must* be used skillfully.

EPILEPSY.

As in apoplexy, the patient, if the fit is thoroughly pronounced, falls to the ground, but the stupor is not a quiet, snoring stupor; he froths at the mouth, his body is convulsed, there is a choking sound in the throat, spasm of the muscles of the jaw, making him liable to bite the tongue; the face is contorted, and usually livid, though sometimes pallid. These frightful symptoms, after continuing from a few minutes to an hour or more, pass off, generally leaving the patient in a quiet sleep; this passes away in its turn, and the patient awakens apparently almost well.

Special Points in the Nursing.—As soon as the attack comes on make a handkerchief into a roll, and put one end of it between the teeth to prevent the biting of the tongue. Loosen the clothing, and especially that around the neck; raise the head, shoulders and body to a half-sitting posture.

If the head is hot, cool it with cold water. If the feet are cold, place jugs of hot water around them.

Persons subject to epilepsy should be particularly careful about their diet; careful and not overdo physically or mentally; take daily exercise in the open air; take frequent warm or cool sponge baths, and obey generally the sanitary conditions which govern health.

CEREBRAL MENINGITIS,

Or inflammation of the membranes of the brain, may occur in persons of any age, though the old and children are more subject to the disease than those in middle life. It is a disease of great danger.

Symptoms.—Intense headache, intolerance of light, uneasy sleep, or total want of it; mental disturbances, constipation, and in children, rolling of the head and eyes, and often convulsions.

But here it may be remarked that in this, or any other disease, we need not expect to find all the symptoms that make up the full description; but we do expect to find enough of them to make up the trend that leads to the correct diagnosis.

Special Nursing.—The doctor cannot see the patient too soon. He will order the room to be darkened, kept full of pure air, and in profound silence. He will order cold applications to the head, but the nurse will remain only to see that these applications are rightly applied. A uniform coldness must be sustained, and that without permitting the water to drip over the bed. There are several modes by which this may be accomplished, and the medical attendant will make known which he prefers, and it will only remain for the nurse to carry out the instructions to the letter. If the cathartic the doctor orders does not in due time operate, it should be assisted by an injection of salt and water—a tablespoonful to the pint, using for an adult all of it. No other than the simplest nourishment should be given, and not even that without asking the physician first. If the patient be a child, it should be kept in physical quietness, and that will forbid rocking in the cradle or jolting on the lap.

In many cases of this terrible disease the patient has a tendency to sink; if signs of sinking arise, they must if possible be checked before they reach unto death. Hence, for such symptoms stimulants must be given and the patient warmed up by every means in human power. In relation to the kind of stimulants, I deem phosphorus as efficient and much safer than alcoholic liquors. Homœopathic tincture phosphorus, one part; alcohol, nine parts; mix. Dose, three drops in water every hour until reaction takes place. The doctor should, of course, be called immediately.

During the convalescence quietness must still be the order for the patient personally and to all that surrounds the patient. Prudence in *every* sense is wholly indispensable, for relapse is easy, and relapse means death.

RHEUMATISM.

Persons predisposed to acute rheumatism, or suffering from

the disease in chronic form, should take great care to avoid all causes of a cold; should wear woollen under-clothing all the year; use frequent salt-water baths, with much rubbing; pay strict attention to diet; and if practicable, live in a climate the atmosphere of which is dry and the temperature not subject to sudden changes.

NURSING.—This is a disease in which the patient usually suffers excruciatingly and for some time before it is willing to let go its hold. In some cases an alkaline treatment, consisting of large doses of bi-carbonate of potash, neutralized with lemon juice, cuts the disease short; if this or no other treatment shortens it, both the sick person and nurse will need all the patience and forbearance they can master before the unwelcome guest takes a departure.

Everybody will agree with me that everything that increases the pain should as far as possible be avoided; and yet in practice how seldom is this heeded! The nurse will walk heavily on the floor, handle the patient not as carefully as possible, talk a great deal and loudly, while members of the family will noise around generally—all to the intense misery of the person ill. With all other good care the bed-clothes should be supported by a hoop, instead of permitting them to rest their burdensome weight upon the person; loose flannel garments should be worn next the skin of the patient; the atmosphere of the room should be maintained at an even temperature, and at that degree the most comfortable to the person ill. When it is necessary to move the patient, it often can be best done on the sheet. The bed-pan better be used instead of getting the patient up. The pulse, temperature of the body, condition of the bowels and kidneys should be observed and reported at every visit of the physician.

Milk during the first part of the disease is the best nourishment. Ask the doctor when other food may be allowed.

CHLOROSIS.

This is a disease in which the nervous system fails to exert its proper functions over those of organic life, thus producing low

spirits, a disinclination for exercise, dyspeptic symptoms, constipation, palpitation of the heart, irregularities of the menses, impoverishment of the blood, and a pale or palish green complexion. It is especially an affection of girls at the age of puberty—when the girl is rapidly passing to womanhood.

It is important that this complaint be early distinguished. While it should not be taken for heart disease or consumption on the one hand, or the *necessary* condition of a girl on the other, it should be taken for what it actually is and early treated by a competent physician. He will address the treatment, not chiefly to the blood as commonly done, or to any other mere *effect* of the disease, but to the cure of the nervous affection—the disease itself—and to the reparation of the damage it has produced. It belongs to the mother to remove, as far as is in her power, the causes which have produced the disorder, and to place her with pallid cheeks under the very best hygienic conditions. With these ideas in view, if the daughter has been deprived of pure air either by night or day, her sleeping-room must be made capacious and well ventilated and the house no less so. She must have regular and well-regulated exercise in the open air, *anything* that will animate her, and give vivacious pleasure. If her mental labor at school has been excessive, make it light, or, better, withdraw her entirely from her studies. If home influences have in any way been unpleasant or depressing, let a radical change come over *home* and give her cheerful society. If she has been deprived of a sufficient amount of sleep, send her to bed early and let her stay there late. And last, but not least, every mother should know that some girls, and many boys, become subject to excessive erotic excitement without natural gratification. In girls this is liable to produce this serious disease, chlorosis, or even paralysis or insanity, with all their resultant evils. The extreme delicacy of this subject should not by any means deter mothers—*every* mother—from giving both her girls and boys decided warning and advice in regard to this matter before habit is formed and mischief done. Well-directed electrical treatment is of all remedies the surest to remove the cause of chlorosis and to cure the disease.

PUBERTY IN THE GIRL.

At a certain age, varying in different climates and under different conditions, but in this climate averaging at about fourteen years, she begins to assume that trim, graceful, bewitching form that characterizes her as a woman. The eyes, the voice, the manner, and apparently her whole soul, share in the transformation, and she has become the dearest and sweetest object that ever enchained the eye and soul of man. A thousand pities that this wonderful metamorphosis may be attended by organic disease, as consumption or uterine affections, especially if the laws of her nature are disobeyed. Her system, under the most favorable conditions, is more or less weakened, and if she has the seeds of consumption or other hereditary disease implanted within her, they are very likely at this period to germinate at the slightest incentive and annihilate the beautiful being in whom they are planted.

Menstruation should occur at stated intervals, but in different females the intervals normally differ. In some healthy girls, the menstrual sickness recurs every twenty-eight days; in others, oftener; and in still others, less often. So the period which the sickness continues naturally varies in different girls from two to seven days; but in the same girl neither the interval nor the sickness should alter much. Again, a girl may notice her first menstruation, and see nothing more for months; while another is perfectly regular from the first. The last is a favorable sign, and generally indicates good health and sound constitution. Nevertheless an irregularity at first, if the health is not affected, need excite no uneasiness. But in any case of irregularity, whether the girl has just begun menstruating or not, if there are the slightest symptoms that the physical or mental health is impairing, immediate attention is demanded.

The disorders of puberty would be few and far between were all the laws relating to the hygiene of that period understood and strictly obeyed, especially such as pertain to regular exercise in the open air, sufficient, proper and loose clothing, correct eating, regular bathing, care during the menstrual period, freedom from an unreasonable or unnatural excitation of the passions.

The management during the periodical sickness is of no small consequence, for from mismanagement proceed many uterine diseases and other grave affections. Long walks, over-exertion of every kind, intense study, exciting or depressing mental states, should be avoided. Nourishing, but unstimulating food, the wearing of especially loose clothing suspended from the shoulders, avoidance of wet feet and all kinds of exposures from which a cold might result—all should be insisted upon. She should, during the same time, sleep no less than nine hours every night, and this will deny her attendance at dances, and the keeping of late hours on any occasion.

If the suffering is great, or the discharge too profuse in the young or old, *rest* in a reclined position is the first remedy, and if not a sufficient remedy, the family physician should be consulted. If the discharge is delayed or suppressed, let the feet be bathed at night in hot mustard water; let her drink a cup of hot ginger or tanzy tea, go to bed, and in the morning take brisk exercise. If this proceeding fails to bring on the flow, the following may be taken: saturated tincture pulsatilla, one part; alcohol, nine parts; mix; dose, three drops every three hours in a swallow of water. But a married woman, unless she is *sure* that pregnancy does not exist, should do no more than bathe her feet and drink the ginger tea.

If one suffers greatly during menstruation, or if at other times a persistent pain is felt in the lower part of the back, or pain or an uneasy sensation in the uterine region, the opinion of a skilled and careful medical adviser should be secured, concerning the cause and treatment.

If serious symptoms persist, the patient should take a course of electrical treatment; for this above all other remedies known to physicians is the most efficient in the cure of uterine diseases, as well as most other diseases of a chronic or subacute nature.

I have every reason to believe some physicians are accustomed to make needless raids upon the womb. The custom should, for the sake of chaste womanhood, be soundly condemned. Yet the other extreme is not commendable, for it should be understood that actual uterine diseases have become very fre-

quent, and their deplorable actuality is a sufficient reason why they should be cured. Reason, not modesty, should here be the guide, because it is self-evident that there is the same need of curing such affections as other physical diseases, and the physician should use every delicacy of a gentleman who is intrusted with woman's confidence.

CHANGE OF LIFE, OR THE MENOPAUSE.

Ladies generally look upon this period of their lives as fraught with peril, and have a corresponding dread of it. So far as immediate danger to life is concerned, the fear seems not well founded. According to statistics, there is no greater mortality among women at this period than among men at the same age. This does not prove the safety, for it seems conclusive that many lasting and painful diseases are originated or developed during this epoch.

It is a cause for great regret that woman, when she has passed through all the agonies incumbent on maternity, the corporeal toils and mental trials incumbent on her womanhood, cannot, with perfect health, *always* continue in the performance of her womanly duties, while she still moves onward and downward to her eternal rest, a dear benefactress of many. She who has no hereditary disease in her constitution, and often she who has, may escape the ills incident to or originating from the menopause, if through all her preceding life she has observed the general laws which sustain human health, and the special laws which maintain the health of woman. To guard against the dangers of this dreaded period, as well as other dangers along life's road, every woman, from the very first of her womanhood, should make herself familiar with the general sanitary rules which have been so tenaciously insisted upon in this book, and follow them most faithfully. If from her maidenhood she has always stubbornly opposed or ignorantly transgressed the general hygienic laws, or those peculiar to her sex ; if she, in the ripeness of her bloom, has been imprudent in ways that belonged to her maternity ; if she has thwarted the course of nature by carelessly or forcibly producing abortions, then the great probability is she will pay for

all before at the time of, or soon after, the turn of life, and pay *dearly*.

But, however she has conducted herself, let her, when she becomes conscious of the approaching tread of the power that takes away her fruitfulness, avail herself of all hygienic means and every vigilance that her safety demands. If she becomes plethoric, known by a sensation of fulness about the head and flushed face, she should practise temperance in all things pertaining to life, and that part of temperance which relates to eating—abstemiousness, if need be. If she has flooding, while it lasts she should keep her bed, and meddle no further with it, unless the hemorrhage is producing exhaustion, for nature is thus doing an essential work. But nature sometimes over-does, so that to art she must have recourse. In such a case the following may be taken: saturated tincture belladonna, one part; alcohol, nine parts; mix. Dose, three drops every three hours in a swallow of cold water.

If this does not sufficiently control the hemorrhage, fluid extract of ergot in fifteen-drop doses may be alternated with the belladonna. The diet should be nourishing, but simple, and the drink cold, both during the flow and the interval.

Even ladies who suffer from no unfavorable symptoms during this period of life should be careful in their attention to the preservation of their general health. If any who previously have been less fortunate begin in the first case, or continue in the second, to feel that all is not going on well, as indicated by continuous pain or uneasiness in the back, or region of the uterus, or other abnormal symptoms or sensations, they should have personal interviews with and advice from their family physicians.

NOTE.—Throughout the book, wherever tinctures have been prescribed, homœopathic tinctures have been recommended on account of their uniformity of strength

MEDICAL ELECTRICITY.

The diseases that afflict and kill us are many in number. Most of us want to live. We are therefore personally interested in the surest mode of curing disease and prolonging life. Many of the sick are using electricity for these purposes. Are they doing what is best for them, or are they throwing away their time and money? It is perfectly proper for each to investigate so as to be able to answer this question intelligently. Do you know of any better way of investigation than by comparison? Comparison with what? If you compare the success of medical electricity with the idea of immortality on earth, then electricity is a failure. No elixir of eternal life on earth has yet been found. But if in most cases of chronic and subacute diseases you compare the successes of skilled electrical treatment with skilled medical treatment, then surely medicines are a failure. When one dies in spite of electrical treatment, it is not good sense to aver that "electricity may seem to help for a time, but kills in the end." That is not investigation. Do any die who are treated with medicines? When one gets well under electrical treatment, it is equally absurd to claim that electricity can cure everything. No such panacea is known. Prejudiced against electricity? Prejudiced in favor of electricity? What real evidence is there in a prejudice about a thing that one knows nothing about? But take the statistics of a hundred or more of hard chronic cases where the sufferers have long and faithfully made use of medicines from the hands of skilled physicians, and afterward of skilled electrical treatment—that will mean something.

It must be remembered that skilled treatment means, 1st, good instruments, and, 2d, treatment administered by one who has made medical electricity a special study. As to the 1st, I need only ask what sort of music could the expert pianist make on an instrument that had lain in the dust of an attic for the space of half a century? As to the 2d, what sort of music can ever so bright a person make on a violin who has never given it a touch before? As much depends on the proper selection, variation of current, its direction, volume, intensity, how applied,

etc., in any given case, as in the selection and skillful use of medicines. Hence the absurdity of a *patient* using or directing the use of a battery. Less dangerous, yet more absurd is it for any one to use an electric belt. For, if it could be so constructed as to permit the current to pass through the body of the patient, it might treat imperfectly the parts through which it passed. For it to treat any other part or organ of the body would be a physical impossibility. The current passes from pole to pole. The positive and negative being generally placed around the belt, the current, it is evident, will pass around it, and around, not through the body at all. Besides, the galvanic is not the current that is always nor *generally* required for the treatment of that part of the body around which a belt is situated, and the current from an electric belt is the galvanic current. It is therefore self-evident, speaking in a general way, that if an electrical belt does any good, it must be in the similar way that Christian science does good, *by mental impression.* In those old stubborn cases there is no cheap and sure panacea. I wish there was. But if health is regained at all, it must, in the present state of our knowledge, be regained by skillful and more or less expensive treatment, whether it be by means of medicine or electricity. Of one thing the reader may be assured, in thousands of cases in which medicines are a total failure, scientific medical electricity, deftly administered, will prove perfectly successful. Enthusiastic? The physician who has seen so many such cases irrepressibly sinking to the grave in spite of all his medical efforts, and that of the best physicians, and then by so pleasant means as that of electricity be able to rescue just such patients from their impending fate, must indeed be all obtuse to the life of humanity if he has not enthusiasm.

HOME



TRAINING

THE MENTAL CULTURE AND GOVERNMENT OF CHILDREN.

Love is that silent, impassioned, almost irresistible force implanted by the hand of nature in the breasts of man and woman which draws them into each other's arms and makes the "twain one flesh." The love of children, with the desire to possess them, was originally and naturally scarcely less potent and universal. The present change in that respect, I am sure, is more apparent than real, for we are as affectionate as were our ancestors. The person who does not love a sweet child is less than what a man or woman should be. The present reluctance to have children in a great degree seems rooted in the peculiar modern structure of society. So real is this reluctance that in many American homes children are looked upon either as nuisances that ought to be abated, or as luxuries that cannot be afforded. Ofttimes, so unreasonable is the woman, so relentless her purpose, so indomitable her will after conception, that nothing will do than that nostrums of quacks or manipulations of doctors shall end the life just begun. Shame and woe unto those physicians who for *money* will murder unborn infants, and change into life-long sufferers those who thus refuse to have children, and so refuse because they fancy that maternity is incompatible with the frivolous life which they choose to lead, or the behests of fashion which they fain would follow. This crime is one of the fashions of to-day, and the fashion prevails in all strata of society, among all classes of infidels and all denominations of Christians. Is there not one great-hearted, electric-minded woman in all the land who will raise her protesting, persuasive, conquering voice against this cause of woman's suffering, deep-rooted sin, and half-smothered shame? Does it not well deserve the strongest denunciation of every man and woman? Is there

no power on earth or in heaven to *stamp* and *burn* the fact upon the human heart, that they who do this thing are murderers? That she who suffers it to be done, subjects herself to personal danger as well as to disease and death—an essential suicide?

Dr. Storer, one of the first physicians of Boston, is the author of a little work on this subject, and it is so plain, so sensible and to the point, that it ought to occupy a place in every home and in every heart. The title of the book is "Why Not?" A suggestive question. Why not, indeed? The unborn child is endued with life from the moment of conception. Therefore, if you forcibly wrest it from its incipient home, you take its life. It would be far safer to the health and life of the mother if she would wait until the natural birth of her baby, and then quietly smother it. Some do pursue this course, and they are called murderers! But if this be murder, why not the other and the often added suicide? "*Why not?*"

As "home is not home without a mother," so it is not home, even if made of gold, unless a child is there. For when man and woman grow into bloom, if they marry, grow old, wither, and die childless, they often die soulless. Children, little know-nothings as they are, expand our souls and discipline us up to our best estate. "A little child shall lead them." Such is the inherent philosophy of God in human nature. Our children grow into men and women, and are the staff and strength that we lean upon while passing through a serene old age; and as with shrinking steps we approach our graves, and fall into the last sleep, our children are the guardian spirits that will deal with us tenderly, weep over us, and cherish our ashes when we are gone.

Radiant bride, then the happy mother, thy babe is born to thee, and as thou dost enfold the little darling to thy heart, whose every throb is a throb of love, thou feelest that "Infancy is the perpetual Messiah, who comes into the arms of fallen men, and pleads with them to return to paradise." And now it belongs to thee, dear mother, to raise thy baby up to a healthy and beautiful life. Dost thou shrink from the responsibility so great? Prepare thyself for thy task; then clothe thyself with living zeal and faith, and success awaits thee.

The mind as well as the body of a child grows. The danger of its growing wrongly is even greater than that of the body; so are the consequences more fearful and to be dreaded when the intellect has grown awry. The chief active cause of the danger exists, perhaps, more in the faults, blunders, ignorance of parents and teachers than in the nature of the child. The human being whose intellect and body are completely developed and cultured is the noblest specimen in the whole creation. Abnormally, perversely developed, he is the *meanest* specimen. Therefore a great stretch of the imagination is not required for us to discern the work we have to do. In view of the work often most difficult to the wisest and best, it is astonishing that so many parents do not deem any preparation at all necessary. While it is most properly granted that professional men, architects, engineers, and men in every calling, should undergo a course of instruction, it is generally taken for granted that we can engineer the mind, the most subtle force in nature, aid it in its natural evolutions, without a particle of knowledge which relates to the force with which we have to deal. It is true that many do admit and *feel* most acutely their task is difficult; and yet how few depend not through the whole curriculum of mental development upon their own untutored legislation, their impulsive fancies, or upon the advice of others more ignorant than themselves. Innumerable little graves, the countless feeble constitutions of those who survive, the millions of abortive mental and moral wrecks are the fruits which these haphazard systems produce, if they deserve the name of systems. Then we call the results of these confused parental or school mismanagements the dark, but wise ways of Providence, and we are comforted! This chaotic confusion of mothers, this partial or utter ruin of children, is not strange, because the evolution of intelligence and of morals conforms to laws by which we should be guided, and there is no safety otherwise.

Fathers as well as mothers have their duties and responsibilities in the matter of bringing up their children, and they have no right to ignore them, as some are inclined. When a philosopher was told that his house was on fire he replied, "Go tell my

wife; I never meddle with domestic affairs." So some men would neglect or escape their part in the management of their children. It is something in which they never meddle! They have not the most remote idea that they have anything to do in these small matters. They receive as an utter absurdity the intimation that the future well-being of the sons and daughters of America demands correct instruction, discipline, and guidance at the hands of American fathers! It is true all this paternal labor is somewhat irksome to a man, amid his hurry of busy days and his weariness when evening comes. But is it not possible that the whole load of vexations might be a little too heavy for woman to bear alone? As there is sweet meat within the hardest shell, a silver lining behind the blackest cloud, so there is great satisfaction and joy to both father and mother in watching under their nurturing hands the opening buds of childhood and the development into perfect, imperial bloom. Are *these* "*small matters*" when the future destiny of man depends upon how well or how ill fathers and mothers fulfil the mission which God has given them?

If it is not the prerogative of man to ignore his share of parental government and education, much less is it the prerogative of woman. Both husband and wife owe to their children their most faithful and their most wisely directed efforts to make the *most* and the *best* of them. The husband and wife also owe this most important duty to each other—a mutual agreement and concurrence of action in every detail of their sublime mission. There should *never* be a conflicting opinion or jar between them in their children's presence concerning management, for the little fledglings will notice even the small differences as well as the more disturbing breezes and angry storms in the household, and lose confidence in both parents. The parents will lose control of their children, and the consequences may be more than surmised.

While it is true that each parent ought to do the work belonging to each in the rearing of their offspring, it is equally true, from the peculiar position in which woman is placed, that her children's destiny depends greatly upon her. For man's

home is everywhere, ranging life in all its plans. Not so with woman. The hearth is her home. Embosomed in the endearments of her children, she lives in a cozy chamber of paradise. Her darlings are her comfort—her glory, and what she makes of them, her golden reward.

A sculptor takes a formless, unhewn block of marble, and impressing upon his mind the image of what he wants to make of it, holding that image in memory, he chips, and chips, and chips, and at last, after long, patient labor, there stands before him the realization of his beautiful ideal. Children, in their knowledge and character, are as formless as the sculptor's unhewn block, and sometimes not more plastic. With the aid of their parents, they have all their character and education to make. If they would not in the end be as crude as when they began—if they would not transform themselves into worthless beings, or perhaps hideous monsters, they must, by the mother's help, possess themselves with a will to be what they ought. They must, through the same aid, be their own creators. Along the advancing hours, days and years chip out a fault here or there, and evolve virtue, sweetness, intelligence, goodness under the moulding hands of the parents. At the last there should be a new creation in the form of a true woman or a noble man. The child cannot be expected to accomplish this great work alone. For every desirable growth there should be parental vigilance, and where needed, parental aid, but not parental tyranny. Neither father nor mother must be unconscious of the fact that their child is flesh, and blood, and soul, and can suffer, not unfeeling marble to be hewn by an unfeeling chisel. *Kingdoms* have been ruled by tyrants, and kingdoms have cursed them; but in some families there have been tyrants *un*cursed. In history we read of slaves; the children in some homes are more menial slaves than history ever dreamed of.

All mental faculties have their uses, and may have their abuses; but to cause them to perform their proper functions—to make up a desirable man or woman, there must be at least a reasonably even pace—a balancing in the unfolding or educating processes. Without appropriate parental guidance, such is not

likely to be the method or result. Without it, the inequalities of mind or passions will shoot out in the form of various perversities. Perversities often begin very early in life, and when not controlled, lead on to ruin. Therefore it is well for the mother in the interest of her children—no, not merely well, but obligatory upon her—to prepare herself efficiently to meet the out-shootings of predominant, overruling propensities as they arise, and be able to command them, lest the child become her master, and a slave to its own perverted wilfulness.

Some of the modes of educating and governing will soon be considered; but I wish the mother fully to realize, 1st, the importance of early impressions upon the child; 2d, the necessity of learning to govern herself.

The worth of early impressions to a child can hardly be overestimated. The learning of the schools grows more or less dim to memory; the events with which manhood becomes cognizant fade away; the impressions made upon the mind of infancy and childhood, never. They will remain fresh as the things of yesterday to the man of imbecile age. It is not only essential that impressions be made *early*, but that the *quality* be such as to aid in elaborating and moulding the character with the greatest possible perfection. No mother can adequately aid in perfecting character, unless she learns to govern herself. She should learn that before she even *begins* to govern her child. Then she needs the firmness of the oak, or the persistency of the child will sway her from duty; the flexibility of the reed, that she may change her tactics when necessary; sound common sense, and the sense of right, tempered well with mercy, for she is dealing with darling pieces of humanity; good nature, that she may shed a flood of good cheer through the home, and that good-will may come and go from, to and over all. "Whatsoever a man soweth, that shall he also reap." If you fling angry, uncontrollable passions into the minds of your children, they will grow into whirlwinds, and you will reap.

Parents love their children well enough, and many manifest their love, but some, alas! hold their affection in obscurity, and so fling angry vituperations through their teeth as to make their

attitude towards their children that of perpetual war, or else alternate peace and war—an unceasing succession of parental paradoxes. The best women sometimes become hectored by the antics, or caprices of their boys, and oppressed by household cares, or some bitter trial, and unless they are perfect governors of themselves, or concentrated patience, are apt to be vexed and cross with their children. The better and the more affectionate they are, the more poignant will be their grief, and the more bitter their repentance after doing injustice to one of the little ones.

Something will be said hereafter about the evil tendencies of a passionate government in a mental point of view. I wish now to state a case illustrative of the physical dangers of such a government. The following is extreme in its consequences; but if consequences so serious can sometimes follow corporeal punishment, it is more than probable that minor evil effects may *often* follow. Mrs. A. and Mrs. B. were near neighbors, and intimate friends. Carlie, the son of the former, and Mary, the daughter of the latter, whose ages were about six respectively, were in frequent and close companionship, enjoying their young lives in the freedom the most consonant to child-happiness. Mary was taken ill, and Carlie visited her, and told her how sorry he was; when he went home he hid his face in his mother's lap, where his little bosom was shaken with a storm of sobs and sighs for the one he loved so well and feared would die. A beautiful picture of young love's sympathy if it had ended here. But, no, for Mrs. B. soon calls to inform Mrs. A. that Carlie had taken away Mary's orange which lay on the table in the room in which Mary was. "There can be no mistake about it," said Mrs. B., "for the orange was on the table when Carlie entered; gone when he went, and no one else has been in the room." She cared nothing about the orange, she said (and she probably did not), but thought the mother ought to know it, for the habit of taking things might grow upon the boy. Now Mrs. B. was a truthful woman, and the evidence so strongly set before Mrs. A. seemed indubitable. Therefore she supposed she was absolutely certain that the child had stolen. "Thief," she exclaimed to

herself after Mrs. B. had gone, "what a name to be applied to *my* boy!" Although a woman of many virtues, and great affection for her children, the thought that her own Carlie would steal was a match which set on sudden fire her exceedingly impulsive and passionate disposition, and in her mad frenzy she boxed Carlie's ears, and struck harder than she knew. In an hour or two afterwards the child had cried himself to sleep, but the sleep was disturbed, and the mother felt sorry for what she had done. At midnight the father and mother were startled by the spasmodic screams of the boy, and they found him very ill. The physician, who was immediately called, pronounced the case congestion of the brain.

The dear child grew from bad to worse. Though all unconscious, his constant utterance until he passed away was: "Dear mamma, I did not get Mary's orange—I love Mary." No, dear little one, you did not get Mary's orange, for it was found, when too late, under Mary's bed, having in some way rolled from the table.

The mother, asleep or awake, will incessantly be overburdened with the significance and force of those words: "Dear mamma, I did not get Mary's orange—I love Mary"—words that crush her equal to the weight of a world, and who would feel as she feels for the wealth of the world?

This lesson teaches parents the importance and duty of learning how to govern themselves. That there is danger in striking children on the head there is physiologically no doubt, and experience corroborates the fact. It is true that such an act does not often produce such serious consequences as above mentioned; but the young brain is very tender and susceptible of disease, and will not bear knocking about without more or less injury.

In the bringing up of our children, the chief aim should be, to teach them how to live a complete life—a difficult task for the wisest and the best. For a complete life means more than sound physical health; more than the ability of direct preservation; more than a complete knowledge of business, and how to make money; more than an appropriate intellectual education;

more than a wise development of the moral nature; and more than the polish of the gentleman, or the refinement and grace of the lady: it means *all* of these.

PHYSICAL EDUCATION.

The means by which sound physical health may be preserved have been given in preceding pages. I here wish simply to refer to the intimate relation, the interdependence which subsists between the body and mind.

The man who understands business ever so well, whose education is ever so profound and widely extended, and whose character is ever so pure, if, physically, he is weakly and sickly, he is but half the man he otherwise would be. How much of manual labor can one do without hands? How much more *with* hands, if there is no physical or vital energy behind them? How much logical or practical thinking can one do without a mind? How much more *with* a mind if the body wilts under the most moderate exercise of it? The most efficient, successful life must be energized by a stalwart body. If an invalid's life be successful, good health would have made it more successful. If successful, it is a success won through agony. If such a person is reasonably happy, or if he does not make every one around him unhappy, he has surely gained an uncommon mastery over the poor environments of his soul.

For influences of the body on the mind, see that subject.

DIRECT SELF-PRESERVATION.

Nature, as in all animals, has provided children with the instinct of self-preservation. This instinct is manifested by the infant in its cries when it sees an unusual object or hears an unusual sound, which, to its little nature, seems dangerous, and if the child is old enough to run, how quickly it scampers to its mother's arms—the goal of its surest safety. If parents are wise enough to give requisite, yet not dangerous scope for the child's quick observation, it will with rapidity learn what is really dangerous and what is not, and still naturally shrink from the danger.

The instinctive fear of external violence and the way of

escape, is not all a child should learn regarding his self-preservation. The laws which must be observed in order to retain good health and to assure a fine corporeal development must be inculcated. This educating process, in a practical way, should be commenced at a very early stage of life; then when the child becomes a man or woman practical hygiene will be almost as natural to him or her as an instinctive act. Concerning some things in the direction of hygiene, the child's *natural* promptings are correct, and parents should be well informed and wise enough to distinguish, and not interfere with them; for here, as in all education, children can, ofttimes, teach their elders, while in other matters, as the preceding pages have shown, the most minute circumspection is emphatically demanded.

The importance of carefully instructing children in sanitary laws may be discovered by looking around among your acquaintances, and finding out how many of them are more or less affected by ill health. Most persons, when asked how they do, will, from habit or reluctance to tell their true condition, say, "I am very well, thank you." But investigate with polite, yet searching questions, and you will find that the usual state of a great majority of all classes is not that of perfect health. Then again find out how few reach old age with unimpaired health, and you will naturally conclude that it is really a matter of some importance to teach children assiduously and minutely the conditions of keeping well and of long life. Some corporeal ailments, it is true, are unavoidable, but such is not the rule. The fact is, health is governed by immutable laws, which can be understood by parents and taught to children and obeyed by them—and this means safety from most human ills. Considering another fact, that vigorous health and its attendant vivacity of spirits are essential to the utmost success in life, and to a fair proportion of a perfect life's enjoyments, it cannot well be thought that the earnestness with which I have pressed health subjects at all points, is at all unreasonable.

The infant is endowed with an instinct to struggle for existence, as shown when but a few moments old by its efforts to find its mother's breast. The instinct of self-sustenance continues

through life. In manhood and womanhood something more than instinct is demanded successfully to cope with the world's competition, and that is brains and the power to use them efficiently in the ways of practical business. The education which develops this power parents must teach, and sons and daughters must learn. This brings us to business education.

TEACHING OUR SONS HOW TO DO BUSINESS, AND OUR DAUGHTERS HOW TO MAKE BREAD.

Our Boys.—Not a word need be said in the way of convincing men that success in business is important. In fact everybody, in a manner, is already too well convinced. It is really notorious that a great proportion of business men talk of little, think of little, but business and solid cash. Should a stranger visit this world who had never been introduced to our ways of life, he would naturally suppose that to get rich and to die is our whole business and end of life. For all that, how common it is for fathers not to educate their sons any in real practical business or business habits aside from theories they gain from studies at school!

The school is well, but knowledge of books is not *all* of education. Why do the sons of the rich so often become poor, and the sons of the poor so often become rich? Is it true that wealthy men's children are generally idiotic? Degenerate sons of noble sires? Not so. In a great proportion of cases of non-success, the failure may justly be attributed chiefly to three sources: 1st. Boys are furnished with plenty of not self-earned spending money; or 2d, they have an imposing, ever-living sense that "Father is rich, and I have no need to be a slave either to work or business;" or 3d, when young, their services are not needed, or, if needed, not called into practical action.

As to the first source or cause I would say: give an infant a gold coin worth $20 and a piece of brightly-colored wood worth one cent, and the little know-nothing will as likely give the gold away, or throw it into the fire, as the piece of wood, because it does not understand their relative or absolute value. A youth or young man, while he knows their nominal value, does not

understand the absolute worth of the gold much better than the infant. The golden eagle *really* represents that amount of muscular or brain labor which it took honestly to produce it. How can he understand this who has never moved either muscle or brain to earn a cent? He cannot. But let him earn $10 in the harvest-field, store, bank, factory, and *then* he will better know its worth; and if all the money he uses is self-earned, he will be likely to spend it with some amount of judgment. On the other hand, if unlimited sums are poured into his pockets by a free, indulgent father, those pockets will usually allow it to leak out again and to be scattered to the four winds of heaven, while the boy is dancing and trifling his life away. Therefore it seems reasonable to conclude that spending-money should be given to boys with great discretion. Better have them earn it in the sweat of their own brows, or by the useful activity of their brains.

As to the second cause I will merely say: you were born with a silver spoon in your mouth; you will by-and-by, perhaps, ride golden steeds—steady, my boy, lest by gradual exhaustion or some sudden lurch you finally land in State's prison or "over the hill at the poor-house!"

As to the third cause. The boy who is not educated for real business, though ever so intelligent, has not practical sense. But boys are not always to blame. Idleness is often *forced* on them through the unpardonable thoughtlessness of fathers in their own press and stress of business; or fathers have not *time* to educate their sons in the details of business, even if they are willing to be so educated; or fathers have neither the time nor the energy to use the necessary disciplinary force to thus educate *un*willing sons. The do-nothing of their boys therefore goes on. Thus enslaved to idleness, the mother of mischief, they become fast, speculative, and grow anon into "Young Americas." Of life's realities they know absolutely nothing. This is not surprising. Unfortunate are fathers when life goes out if they leave to such children large estates earned by long self-denial and earnest toil. Unfortunate such children who inherit those estates, since they will not only lose them, but themselves, in going to the bad.

Every boy, rich or poor, should be taught business, not only as books teach it, but *actual* business put into practice. In the choice of an avocation for a boy, a high-sounding title is not to be chiefly considered, but rather the *position* which he is by nature designed to fill. It is not the business so much that makes man a *man;* it is the thoroughness, the exactness, the integrity with which he performs the functions of the business. As for me I fail to see why the planting, sowing, and harvesting of food and selling it to the merchant for him to eat, is any less elevated or honorable than it is for the merchant to sell clothing to the farmer for him to wear or tea for him to drink. So all the way round. No, sir; it is not essentially the business that makes a man noble or ignoble, but the man who does or does not ennoble his business. A man of industry, intelligence and integrity is to be respected, whatever be his employment, or wherever on earth he be found.

A young man, if his brain is evenly balanced, may not be especially fascinated in view of *any* business and still be capable of becoming successful in almost any employment. In such a case, unless opposed by some physical condition, that which seems most available is generally best. Generally the employment in which his father is engaged is most available. Not that a son should necessarily follow the vocation of his father, but if there is no mental or corporal incompatibility, it is surely wise to do so, because *then* the father will himself teach the son business principles, induct him into the vocation, and be enabled at the same time to keep him under his own immediate supervision and control, instead of endangering him for all time by delegating this business to others—no small consideration.

However, if a boy is almost continually busy with tools constructing every little device which young genius can create, if always ready to leave everything for this employment, then destiny has designed him for a mechanic, unless there is some strong counteracting reason for it, and it is not wise to try to make anything else of him.

If it is one's chief delight all through boyhood to make pills, compound medicines, and play the cat or dog is sick and

needs the remedies, then he probably should be a physician.

If a boy has an able command of language, and has an irresistible disposition to make speeches and hold discussions, the position which he is designed to fill is manifest.

If, like Benjamin West, he has so strong an intuitive love for creating pictures as to commence by making brushes from the tail of his cat and using the rudest of paints, fighting through all adverse circumstances as West did, it is not difficult to perceive that he ought to be a painter.

One is usually most capable of doing what he most delights to do.

Books, apprenticeship, experience, discipline—these educate the young man for business. During these educating processes, it is one of the father's and instructor's duties to awaken enthusiasm, but an enthusiasm guided by reason and tempered by exact honesty. One of the methods by which this may be accomplished is by repeatedly and favorably referring the pupil to men of good character, successful in business, and such as the father would have him imitate. If the boy has faults, let him be referred to men who have similar faults. For example, if inclined to be lazy, let his attention be directed to the squalid homes of lazy men; if careless or destitute of order, let him be shown the shop, the store, the farm, the house where disorder reigns, and where everything is allowed to run at *loose-ends;* if inclined to taste of alcoholic liquors, impress on his mind how this taste, if indulged, naturally grows into an unquenchable thirst and an unconquerable habit. Let him be referred to the incorrigible drunkard and to his home—miserable, even if inlaid with gold. Let the boy be asked if he wants to be a man like one of these. So meet his faults as his case requires all the way round. Of course in order to inculcate all this in a boy's mind so thoroughly as to make it a part of his very being, the lesson, like everything else relating to the education of children, must be repeated again and again; but in the intimate companionship of father and son, the patience of reiteration, in the great proportion of cases, will be crowned with an amply repaying success.

OCCUPATIONS FOR WOMEN



OUR GIRLS.—Shall we educate our girls to be genteel, and shall gentility mean to us only idleness, helplessness and a lolling mien?

If many of the sons of the rich, and some of the poor, are turned loose on the world as wild colts on the plains, the sisters of those sons are very carefully housed. A few of them, it is true, dance to vain pipers and fly to the winds, yet gentility is always the object kept in view. True refinement, gracefulness of manners, sweetness of disposition based on goodness of heart, surely are womanly qualities which cannot be too highly estimated nor over-praised. However refined, sweet, modest and good a woman is, she is still human. Why should she not be subject to human duties? Some mothers have a deep conviction that the whole mission of their daughters is to learn music, painting and excruciating gentility, to take men by storm, and to marry a husband in high life—a duke, perhaps, even if the duke be a fool. Music, painting and all the accomplishments are desirable, and almost indispensable to every lady, and to marry is well; but there are many things concerning our physical life quite as indispensable, and one of those things is good cookery. Men and woman are not likely to be very happy, and to shed around them floods of spiritual warmth and affection, if they are suffering from dyspepsia, and the morose contempt of mankind generally, which dyspepsia so often produces. Few may expect to escape that disease, if fed on foods badly prepared. But it is ungenteel, in the opinion of some mothers, to teach their daughters the necessary knowledge belonging to maternity and housekeeping. It will not do, they fancy, to debase them in such domestic service as making a loaf of bread. Their ideas of the nobility of labor are expressed by the word ignominy. Their ideas are no less than inexcusable short-sightedness. "We want our daughters to get eligible husbands." Yes, dear ladies, but do sensible men want for wives helpless dolls, who are utterly unprepared to manage the affairs of home and of children, and who necessarily must be dupes of their servants? Such girls will do to flirt with—not to marry. What mother has the assurance that her daughter will marry a rich man? Or, if she does, is there

no possibility that he through reverses may become poor? But if rich, and remaining rich, is it, on account of a wife's incompetency, desirable to delegate domestic matters to the rulings of those whom she should direct—to those who are often more incompetent, but armed with more self-assurance and ignorant stubbornness than herself? Or if the wife is obliged to do her own work, can she not see much advantage in knowing how to do it? Mothers, you may be assured that rough-and-tumble housekeeping and unwholesome cookery often change love to coldness, and a happy married life to divorce. Surely a practical knowledge of all domestic affairs is highly essential to every woman in every circle of life. The place to teach these things is at home. The mother, if she is capable, is the proper teacher; and she alone is responsible for the unhappy consequences ensuing from neglect of her manifest duty. This is true, notwithstanding a large proportion of the daughters of America, who occupy the charmed circles of society, have come to fancy that to do anything more substantial than fancy-work is vulgar. Their mothers are the authors and sustainers of this fanciful notion in that many who are intelligent enough to know better, humor and encourage their daughters in the whim, thus making it perennial.

While of all places in the world, home is the best place in which to educate girls in cookery and housekeeping, and mothers the proper teachers, unfortunately in many homes the mothers are either unwilling or incompetent to do the work. Therefore the importance of scientific schools in every town where, for a moderate sum, girls may learn the principles and practice of wholesome, palatable cookery, economic housekeeping and domestic esthetics. Girls may be assured that there is no disgrace attached to it, however affluent, matrimonially eligible, beautiful or peerless they may be. The capability and force to control the affairs of home do not mean low servitude nor drudgery. They simply mean one important condition of a happy, prosperous home, and the not unpleasant sensation that she as the wife is indeed a *woman* regally crowned.

INTELLECTUAL EDUCATION IN ITS RELATION TO PHYSICAL HEALTH.

This subject has already received some attention, and it only becomes necessary here to touch upon a few points preparatory to the consideration of intellectual education.

There is sufficient hygienic reason why children should not be sent to school at too early an age. The physical and mental development of a child at any given age is so unequal that no definite period can be stated at which education from books should commence. The physically vigorous child, whose brain is ordinary, should have very little to do with books before the age of seven; the delicate, with an ordinary brain, not as early by at least one year, and the child that has a large brain with marked tendency to precocity, still later.

Young children should have plenty of exercise in the open air, and receive their chief mental food from great nature, and from the things which art has constructed, rather than that which is afforded by the school's jading drill. Physical, perceptive, moral training best attune the young child to its nature. A premature development of the purely intellectual powers is always at the expense of buoyancy of spirits, health, and the best manhood or womanhood, and what is lost cannot well be regained.

While it is wisdom not to press the knowledge of books upon very young children, it should be remembered that the perceptive faculties are active and strong at a very early age, as the disposition to observe and to imitate, and the power to endure sufficiently attest. That is nature: taking advantage of her behests as manifested in this inclination of children, a vast amount of knowledge of familiar things may be imparted; the perceptive powers cultivated without confinement, or in any way interfering with physical health and natural development. This at an age when a close application of their little minds to the lessons of the schools would be decidedly prejudicial. This is education of and through the perceptive faculties, nature's method. Not abstract subjects addressed to those parts of the intellect which, as yet, do not exist. It is to be regretted that

the erudition of books is, usually, almost the whole aim in education, receiving as it does, nearly all the attention, to the neglect of health and the culture of the mind through the perceptive organs. This mode not only often cripples children corporeally, but also weakens, or rather prevents the development of the powers of original thought, and makes children and men deficient, often almost destitute, of independent self-conviction, and dupes, or slaves of books.

Girls require, at certain ages, the use of more caution with regard to study, as well as labor, than do boys at equal ages. It has been shown from close and extended observation, that the law for the two sexes is, that the mortality among girls greatly increases between the ages of thirteen and seventeen years, a greater proportion than for boys. That is to say, girls are, during these years, much more tender, and liable to die than boys. This law being established, it evidently follows that hard, sustained manual labor, or study is inimical to the health of girls within those tender ages—more inimical than to the health of boys. The exigencies of many families, however, are such that daughters are put to incessant toil; and the fashion is such in most other families that girls are continued in close study. The result is enfeebled health, actual disease, or sometimes death. When with such toil or study, no periodical rest is granted, the danger is doubly great, and the consequences doubly severe. Every mother ought to know, and put her knowledge into practice, a natural law for girls which imperatively demands a rest at the menstrual period of about three days every four weeks; as there is a natural law for married women which forbids severe physical and mental labor at certain periods, during pregnancy. Also that neither a girl nor a woman can stand without injurious consequences, as long as can a boy or man. Parents have no moral right to place their daughters in situations where they are obliged to disobey the laws peculiar to their sex. Neither have ladies a right thus to place themselves, as they often voluntarily do, when teaching, hour after hour, and day after day. Did it ever occur to a lady teacher that she can make her services just as efficient, by alternate standing and sitting, as by standing continually?

Then with pupils, in a great proportion of cases, it is a serious question whether the school, as many schools are conducted, will do more to fit or unfit for the duties of mature life. The design of schools is to *fit* pupils for life; but that means not only well-developed and cultured intellects, but erectness of body, unimpaired health, good manners, and good morals. Success is the watchword, but failure is far too often marked upon the person and life.

With reference to little school-children, they are kept altogether too closely confined in the school-room for the good of body and mind. Too strong efforts are made to hold the inflexible strait-jacket around them! Fortunately nature has usually made them incapable of close, prolonged mental application, or of quietness and stillness, which incapacities save many from corporeal or intellectual ruin. They often get the names of "naughty" and "truant" as the price they pay for good health, but they make good bargains at that. Small children in school should be allowed very frequent recesses and treated generally as little children rather than as men and women.

Regarding older pupils it is well known to parents, teachers, and children, that if they are to succeed in the competitive examinations, which at the present time are so fashionable, they must be kept going at high pressure. This stimulation to overstudy, sufficiently dangerous to health and vitality of ambitious boys, is especially dangerous to girls at this, the most tender period of their lives. It is wrong. But how can matters be made better unless public opinion be aroused and changed so thoroughly as to place itself athwart the troubled waters and turn back the current?

While the schools generally are good in most respects, and many of them excellent, there is, in some particulars, a crying need of reform. Not only in schools is reform needed, but in certain departments of manual labor and of sports. Until such reform comes, constitutions will be shaken and broken by mental overstrain and by physical overwork. Manual and mental exercise are, when held within the limits of physiological law,

both innocent and beneficial to health. It is those heavy burdens which are put upon children and youth, and which they are incapable of sustaining, that do them mischief directly, and coming generations remotely. Let reform come to the unnatural seething life to which many of our boys and girls are subjected, lest the design of nature be forever disappointed in the manifest future mission of our sons and daughters.

INTELLECTUAL EDUCATION.

Physical, intellectual, and moral education with every child, of course, should go on together with even pace from first to last. In writing, however, for the sake of clearness we are obliged to separate them. Physical education—or how to preserve health and reach long life—has already been considered. Now come a few hints in regard to purely intellectual education, after which the moral culture and government of children will receive our attention.

With regard to intellectual education, fathers or mothers decide that their children shall attend such or such a school often without a thought of *what* knowledge is worth most, or what branches the children will be required to study. All knowledge may have some value, but life is not long enough, and the brain of man is not capacious enough, for the attainment of all knowledge. Therefore, *what* shall we have our children learn at school? is a question of great moment, and one which every parent ought to ask himself or herself, answer it understandingly, and shape the education of each accordingly.

What will best prepare one for the business of life, discipline, and educate the whole intellect is of chief value in a purely intellectual education. Concerning the great usefulness, and even necessity of the ordinary branches of the common schools, there is no question. Not exactly so of high schools and colleges We will start with the proposition that there is too much time spent with the dead languages, especially with Greek. We, who move in the lower or middle walks of life, are not to take it for granted that the years of hard study of these branches are

well spent, simply because some learned men tell us so. Is it not possible that long custom has something to do in keeping these languages so prominent in the schools? May not the long-established fashion be the tongue which tells us that we are but half educated unless we have gone through the college-prescribed course of Latin, Greek, and Hebrew?

The study of the dead languages disciplines the mind, strengthens the memory, and gives an extra knowledge of our own language, thus doing for us what is claimed by some able philologists. But the pertinent question is, does the study of these languages perform a greater work than do some other branches in these directions and in others? Does it discipline the mind more thoroughly than do mathematics or the sciences? None that have studied all these can fairly answer this question in the affirmative. Can it strengthen the memory more perfectly than the study of anatomy, chemistry, or botany? These three and others give sufficient training to the memory, as all familiar with them can attest. A profound knowledge of Latin and Greek undoubtedly gives a better knowledge of English than other studies can apart from the English language. Again the question is, does that extra knowledge compensate in the best possible manner for the long time taken to acquire it? When we compare the writings of the best authors who *are* learned in the dead languages with those who are not, we are inclined to believe that much of their time might have been better spent. But I would not prove that a knowledge of those languages is without any value. On the other hand, I would have pupils study them, and especially the Latin language: only abbreviate the *time*.

MATHEMATICS.—Success or failure in the higher arts of construction greatly depends upon whether the constructors have a thorough or imperfect knowledge of mathematics. The manufacturer whose machinery is illy constructed, or not constructed on the best scientific principles, cannot successfully compete with those whose apparatus is more nearly perfect. The bridge builder may put sufficient material in a bridge, but if strong where little strength is required, and weak where it should be strong, it will break down. So with all.

CHEMISTRY.—The bearings of chemistry on man's surroundings are numerous and exact. Numerous are the industries which immediately depend for success upon accurate chemical knowledge. Besides, so beautiful and wonderful are chemical actions and reactions, that it amounts, in some respects, to a moral and esthetic science.

Biology, physiology, hygiene, philosophy, the science of society, and almost every science, have immense values in the culture of the mind, preparatory to the best success in life, and to the raising of man to his highest plane. Some of these the schools leave out nearly or altogether, and whatever of them applies to business matters, we are obliged to learn—and to learn after leaving school—empirically through experiences and failures, or not learn at all.

The sciences highly cultivate the ability to think closely and judge profoundly. Professor Faraday says that for the want of scientific culture, the most common intellectual fault is deficiency of judgment. That "Society, speaking generally, is not only ignorant as respects education of the judgment, but it is also ignorant of its ignorance."

HISTORY occupies a prominent place in the schools, which is well, if it would instruct our children in the inner life of nations in their civil and social progress, and their present organization, growth, and condition. But history is of little value if the arbitrary acts of kings, the description of battles, defeats, and victories make up the entire theme, and the nation's people and the people's life left out. Let history be a truthful digest of all valuable historical knowledge, and studied in connection with the science of life and of mind, and our children shall learn what is of much worth.

THE FINE ARTS may not fit one particularly for a farmer, mechanic, doctor, or a lawyer, but they do fit every one to become a more perfect being. I can imagine nothing that so finely puts the finishing touches to intellectual culture, and raises one so far out of the mere animal in man, as do the communings of the soul with nature, and the resultant birth of painting, sculpture, poetry, and music. Such culture must not, however, be pursued

empirically, nor automatically, but based on scientific principles, the pure love of nature, and her sublime perfections. Fear not science in its connection with the fine arts. For all science is a grand book written by the finger of God, and is not incompatible with the exercise of the imagination or the love of the beautiful.

Akin to the fine arts is astronomy. If we would lift our minds to Heaven as well as to the heavens, let us learn to read the stars and to hear the "music of the spheres."

How to Educate.—It would seem presumptuous, in the faces of the learned and the great, for me to undertake to write a systematic treatise on education and educating, and I shall not attempt it. A few simple suggestions, growing out of a rational psychology of the young, are perhaps in place.

Having come to an understanding that no child should be educated at so dear a rate as to result in an impaired constitution, and that the *forcing* system and the impetuosity of precocity should be discouraged, the great question arises, what method shall replace the old? The answer is involved in this general proposition: the method of nature so far as practical.

Education should commence in, and continue from, infancy; and it *does*, whether we would have it so or not. The infant is its own teacher, and every surrounding object is a book, which it interprets by *feeling* and handling, as the geologist does specimens, or, by *seeing*, as the astronomer does the stars, or, by *hearing*, as the musician does symphonies. Let the infant here be our teacher, and let us learn our lesson well. The little child learns *spontaneously*, *eagerly*, *rapidly*, and there is no reason why older children and youths should not learn spontaneously, eagerly, and rapidly, if the same modes of educating were used. Therefore the method of learning thus commenced in the infant should be continued in the child, step by step, in regular succession, corresponding to the natural unfolding of the mind: the pupil his own teacher, the parent and schoolmaster the guides.

Parents should guide the education of their children from earliest infancy: for while the infant does spontaneously learn through its senses of sight, feeling, hearing, etc., it is evident

that they must be furnished with suitable objects for the purpose. How can it thus learn for any length of time if confined in a room bare of everything except its cradle and mother, or nurse? It therefore follows that a variety of objects should be furnished the child, not all in a bunch, but one at a time, one to succeed another, as the qualities of the preceding is learned. Considering every plaything and every other object presented a book, care must be taken that the law of regular progression from the simple to the complex be observed. When the qualities of the simpler things have been learned, let the child be taken out of doors and its perceptions kept at work on precisely the same principles. This is educating the perceptions, the disposition, and the physical child. Such is nature's method.

Object-lessons are really but a continuation of the same kind of culture, and should be taught in the same manner; the child should teach itself. Why should teachers depart from that method by showing the pupils the qualities of objects and how all the parts are connected, etc.? The child, before it can talk, acquires the knowledge of things by its own perceptions; the man, after leaving school, makes his own observations, draws his own inferences, and comes to his own conclusions, if he has brains and has not been mischievously educated. What is there in a human being during the intermediate period that requires all this order to be totally changed? Whence the prevailing opinion that the pupil must be *told* everything that he cannot at once comprehend? Why can we not conform our teaching to the pupil's intellectual instincts, and encourage the disposition to tell us, instead of telling the pupil? Let the teacher's business be to lead along and draw out the perceptions and judgment of the pupils, and to show them where they fail fully to understand, after thorough effort. If correct conclusions are reached after hard study or much thinking, the child, of whatever age, is elated, and will delight to gain more victories. This is teaching the child self-reliance, no small attribute in one's struggle for existence or for greatness. This again is nature's method.

Object-lessons, thus begun in infancy and continued in child-

hood, should still be pushed in a higher form through youth. The accumulated knowledge will be a grand preparative to abstract studies in manhood and womanhood, in that the natural method has all along been training the powers of the senses, observation and reason, and those powers thus developed and cultured from infancy, will spontaneously move to higher and higher realms of thought as life continues.

The *forced* form of educating runs against the grain of the pupil, wears the mind and body because it is unnatural. *This* form may be made pleasing, efficient and healthful to the pupil, because it is natural. The natural form requires wisdom and tact on the part of parents and teachers, if the highest success is to be attained. Skill is needed to make each lesson interesting. Therefore study and play should be alternated, tripping songs sung, as M. Marcel well says, "The pupil's natural desire for variety should be indulged." "Lessons should cease before the child evinces symptoms of weariness." Let arbitrary modes in the schools give way to the voluntary tread of the child's psychological nature.

As a test whether a plan of teaching is as successful as it should be, let us ask ourselves these questions: Is the pupil interested in the studies pursued, and is the advancement satisfactory? If not, let the plan be changed for another. If learning is to be either successful or healthful, it is of the utmost importance that the pupil be eager to learn for the pleasure of knowing, not from the wild excitement of competition. For instance, if one reads a book without interest, it is not remembered; but if he reads the book or studies a subject with absorbing interest, memory is retentive. The dire consequences to the health of the forced eternal drill are tersely delineated by Charles Dickens, in the education of the son of Dombey in "Dombey and Son."

There can be little doubt that if we were wise enough, the average children might be saved from apathy in their studies, for it is well known that at present many are but automatic receivers of mental food. Professor Pillans declares that "where young people are taught as they ought to be, they are quite as happy in school as at play, seldom less delighted—nay, often more—

with the well-directed exercise of their mental energies, than with that of their muscular powers."

Believing as M. Marcel insists, that "the method of nature is the archetype of all methods," and best of all methods, I would, in teaching, have the pupil helped to help himself; would have the mental unfoldings so directed as to make them spontaneous and natural; would have in gradual succession the simple increase to the complex. But in the present state of our rational psychological knowledge, I fear that the wisest of parents and best of teachers will sometimes find themselves incapable, under all circumstances, of meeting the exigencies, the peculiarities of *every* mind after the method of nature. Some minds are so deficient in certain qualities or faculties, that those weak, half-dead faculties must be very patiently cultivated, developed and raised into nature, whether the necessary processes are pleasurable to the pupil or not. The nurturing should not be so rigid, frigid and unreasonable as to wreck the little ship upon the strand, nor to change the heart to stone. Surely the result will be more or less bad if such a child is crammed with abstract facts too complex for his comprehension, and crammed by the force of threats, or, as often is the case, of punishment. In view of the processes so often employed in educating, who can wonder that faculties previously bright frequently become blunted, or if previously dull, more blunted still, and hearts turned into stone, and the whole intellect into disgust with useful knowledge? Children are driven by irresistible, and sometimes by brutal, force into this condition, and then we wonder why they are so apathetic, and why receive mental food either with aversion, or as passively as a pitcher receives cold water.

I repeat that pleasurable self-instruction, guided by wise, sympathetic teachers—the method of nature—as far as possible, should from first to last be the absorbing aim. This makes self-reliant men with strong, sterling judgment, and scholars whose education will not likely cease when their school-days end.

THE MORAL EDUCATION AND GOVERNMENT OF CHILDREN.

However perfect the physical health, however broad and pro-


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found the purely intellectual education, man or woman falls far and woefully below his or her highest and best estate, unless the moral faculties are correspondingly educated and attuned. In view of this fact, it is reasonable that they should take a deep interest in preparing themselves for the position they are to occupy as parents. Usually no practical preparation is made, be parental solicitude ever so great. Children are born to many married couples, and grow up amid the chaos of parental misgovernment, unfitted for true society and the best citizenship, and in their turn wholly unprepared for parental responsibilities. A few do prepare themselves the best they can, and all readily admit that the proper management of children is the most important, and often the most difficult of human undertakings; but the great proportion of parents continue this indifference and thoughtlessness concerning their personally teaching their children anything about it.

I do not believe that all children would grow up entirely good were they not spoiled, neither do I entertain a faith that any system of moral government can make a perfect man or woman out of the best child. But I *do* believe that character would reach much nearer perfection, and that no child would come to be wholly bad, if the best system of moral education known were kept in practical force.

One great drawback in the moral education of children besides ignorance is that parents are apt to take for granted they themselves are always right, and their children always wrong, while the fact is, both have faults. If the best possible system of training were known to parents, still we are not *good* enough to make the best possible use of our knowledge. For myself, after long and somewhat thorough study of this subject, a sense of timidity overshadows me when I come to write, because I am neither good enough, nor practically wise enough to make the most and best of what I know in the great work I have to do for my children. Let us, dear reader, come to understand, perfectly as we can, parental duties and responsibilities, and then we can make our children as nearly perfect as our human nature permits, and let us, in the mean time, as far as we can, perfect our human nature.

The ultimate purpose in view in the conduct of moral education is to make self-reliant, conscientious men and women, who will think right, act right, and be fit for good society and good citizenship—an object, I should think, sufficiently great for the greatest natures. To make such men and women of our children there must, 1st, be good government; 2d, proper habits formed; and 3d, the moral faculties properly educated. All these divisions are so intimately associated in practice, that while we shall treat of them *somewhat* separately, they will more or less coalesce.

1. GOVERNMENT OF CHILDREN.—We will first consider government after nature's method, and secondly how far the prevailing kinds comport with the natural method.

Nature's laws are uniform. In the growing, survival and perpetuation of plants and animals, in chemical actions and reactions, in the laws of attraction—*everywhere* is this uniformity demonstrated. The laws of nature are the laws of God; hence perfectly *just*. Let us consider what is the nature of those laws as applied to man. If we thrust a finger in the blaze of the lamp, the finger is burnt; if one falls on the ice and strikes the head, the head is hurt according to the severity of the fall; falling from the house-top of a six-story building, death is the law; if we eat food we cannot digest, we must suffer from the consequences of indigestion, and so on through the interminable catalogue. These penalties are *just*, because of the destructibility of the human body. Thus if fire did not give the child pain it would burn itself continually and fatally, and so would it be with us all in slower processes. The little accidents warn against the greater, and are necessary safeguards against careless self-destruction. Thus the infant, after bumping its head against the edge of the table a few times, learns to avoid these unpleasant hits. If it falls off the door-steps, it learns to be more careful. The child learns, by the experience of its little joltings, bumpings, and jostlings to avoid danger, and when arriving at an adult age it goes out amid the dangers of the rough world with the habit of caution formed as a shield, like a good moral habit would be amid temptation. Nature's

laws of action and reaction as applied to us are therefore for our future physical good, as the training of the moral faculties of our children and applying the inherent natural laws are for their moral good.

That the government of children should be for their future good, and that punishments should be administered with perfect justice and sympathetic humanity, there can be but one opinion. It is often difficult for parents to decide what are absolutely just punishments for certain misdemeanors. Besides it is always important to know what punishments the *child* will think is just. If the child believes the punishments received are too severe and consequently wrong, not much benefit may be expected to accrue. On the contrary, feeling that he is being repeatedly wronged, his innate ideas of justice and injustice will be aroused, and arrayed so thoroughly against parental authority, as to prevent the formation of correct habits, and when grown beyond parental government he has those correct habits to learn, or has wrong habits to ruin him. If a boy jumps out of a barn window and breaks his leg, he does not find fault with the punishment he receives. He feels that it is the natural and just consequence of his own act, and more than likely will call himself a fool for the act. This is evidently just as a child should feel after receiving punishment at the hands of his father or mother. This is how a child usually will feel if the dictates of absolute justice, unmixed with the stupidity of heartlessness, are heeded by parents.

In the moral education and government of children we are neither wise nor good enough to always follow the methods which nature takes in the administration of her physical laws of punishment and reward. We can, however, do our best. For example, if a child, instead of cleaning his muddy shoes outside of the house, comes in and soils the carpet, scolding or whipping is the remedy very generally administered. Do these displays of parental displeasure either reform the spirit which prompts the habit the boy has of thus coming into the house, or remove the mud from the carpet? The natural method is that reflex action of the law involved, which will reform the habit of the

child and remove the mud from the floor; and if the child is required to remove the mud, both objects will usually be gained. To repair the damage he himself has made is simply causing the child to suffer the natural consequence of his own act as truly as when he jumped out of the window and broke his leg. He will usually see the justice of the punishment in the one case as well as in the other.

Again, if the boy carelessly loses his brother's knife, how will it benefit him or repay the brother to use the rod as a punishment? The natural, simple justice is for the boy from his own pocket-money to buy for his brother another knife of the same value as the one lost. He will see the justice of it, good-nature will be preserved towards the parent who enforces the penalty, and he will learn to take care of what he handles, which will serve him a good purpose all through life.

Again, if a daughter tells a lie, by which another in any manner is injured, the natural mode of punishment is for the daughter to repair, in every way in her power, the injury inflicted. This should be insisted upon. She will, perhaps, be more or less excited over it for a time, and yet she will see the absolute justice and simple duty of it, will ere long be sorry for the injury she has done, and if she has a habit of equivocating or of telling straightout falsehoods, she will see the need of reform.

The foregoing examples, which might be indefinitely multiplied, will make clear what I mean by the natural method of government, and partially the superiority of it over a haphazard or an impulsive government.

In the administration of government in accordance with nature, fathers and mothers, while they *must* be faithful executives, are not to be cold and indifferent to the good of children, as at the first glance nature seems to be. Parents should be full of love and sympathy—running over, indeed, so much, that the overflow may fill the souls of the children with affection so full and dear as to be exhaustless and imperishable. The sympathy and affection on the part of the parents, however, must not hinder the showing of displeasure towards childish misbehaviors.

But the displeasure should never be exhibited in the form of an impulsive or unreasonable anger. Parental pleasure should blaze and sparkle with jewelled scintillations when the child does well—*dis*pleasure, subdued by pity, interest, love, should shed its meaning glow upon the child for a disobedient or wrong act.

The natural mode of government is superior to any other in a few other particulars. 1. The punishments which nature inflicts are always constant and unvarying for any given violation. That is, the same action is invariably unhesitatingly followed by the same reaction. Thus, if to-day a child sticks a pin in its finger a fourth of an inch, pain will be the consequence. If precisely the same act be repeated every ten days, pain will every time be the penalty. How different is government as usually executed by parents! For to-day the mother will, for instance, whip her child for a certain misbehavior; to-morrow she will entirely overlook or laugh at precisely a repetition of the misbehavior. This mode of government is the rule rather than the exception. Do *we* act thus with our children? Do the punishments that we inflict vary with the state of our temper at the time rather than with the character of the offence? If so, we may well ask ourselves what the ultimate result of it is likely to be, or whether any wrong habit will probably be forsaken by such a rude discipline. Nature's method is uniformly to teach "the burnt child to dread the fire"—to teach child or man *causes* and their undeviating effects. If we heed not the warnings therein involved the lessons will be pushed to dearly bought experiences. Parents not complying in the government of their children with the natural method, are very likely to teach nothing better than to confirm them in improper conduct, which, if ever unlearned, must be so in mature life. Besides, if the government vacillates from bribing to scolding, from petting to whipping for the same offence, the child at best will learn to entertain conflicting opinions of parental goodness and motives.

2. If a child is invariably taught to right every wrong in conformity with the natural method, as when required to pick up

its playthings after scattering them on the floor, a correct understanding will be gained of cause and effect, which will prove of much practical value to the conduct in life. The artificial system of rewards and punishments, as usually practiced, or even if pretty wisely administered, produces in children the idea that their actions are intimately associated in cause and effect with the pleasure, displeasure, or temporary mood of their parents, and with nothing else. When, therefore, they leave home and go out into the world, they have not that same guiding intuition of cause and effect, and therefore the increased danger of their running into extravagance, folly, and wrong.

3. The system of government by natural reactions is again to be preferred to any other, because it is less personal, and therefore less liable to arouse the angry passions. For example, a son breaks his sister's watch by letting it fall on the floor in the act of tossing it up and catching it as it comes down. Now, if the father scolds or chastises the boy, the latter (if not both father and boy) is angry, and ill-feeling is engendered, all of which does not mend the watch. But if not a word is spoken at the time, and the boy, from previous teaching in this direction, or from request, pays out of his own money for fixing the watch, the simple justice involved in the natural reaction of the boy's own action will command anger and hate to keep still. The advantage of this mental effect will better be realized when we remember that oft-repeated reprimands and chastisements, especially if attended by parental anger (and they generally are so attended), may be expected to do no less than to weaken or estrange a child's filial love ; and the sulkiness consequent on the estrangement, besides its baneful effects on the child, will naturally, in its turn, exasperate parents and cause them to look upon children as more or less unwelcome inflictions.

4. The natural method of government is to be preferred because children in time come almost naturally to conform to nature's plan, and hence their offences, both trivial and grave, as naturally become less numerous. Repeated scolding and whippings, as before stated, lessen in children their filial sympathies and love, and thus make misbehavior the more frequent consequence of

the irritations they receive from the tongues and hands of their parents. Often receiving no apparent sympathy and affection, they come to feel none, and the resultant evils of it are not only miserably felt at home, but go out into society, into their business, and their after lives.

Command *only* when you must—*never* to show either your authority or lust for dominion. When you must, let the command be a fixed fact. Govern in everything as far as possible as nature governs. Teach that certain consequences will follow certain acts as uniformly as the night follows the day, and your child will learn to feel the same respect for your laws as he feels for those of nature; thus you will find government comparatively easy.

SOME PREVAILING KINDS OF GOVERNMENT—HOW THEY COMPORT WITH THE NATURAL METHOD.

The impressions which we succeed in thoroughly making upon the minds of children are enduring. The weal of the next generation greatly and directly, and that of all coming generations partly and remotely, depends upon how well this generation educates the children—how fully the good is developed and cultured, the evil suppressed and eradicated. Therefore the incomparable value of the best moral education.

1. Uniformity.—Nature's mode of government is uniform. Use not, therefore, a vacillating government. The mother who punishes her child to-day for an offence which she laughed at yesterday, constantly threatens what she will do, but seldom performs, may expect to lose control of her children as surely as there will be a sun in the heavens to-morrow, bring endless miseries into the home, and often prepare for moral ruin those she loves really and so well.

2. Trifles.—Nature does not govern or punish only when the body is in danger of injury. Thus she pays no attention when a fly lights on the hand, but place it in a vise and close the vise sharply, and nature makes you pay the penalty by causing you pain. Permitting nature again to be our teacher, we discover that we should not govern nor punish for trivial matters, and the teaching is correct. Show me a mother who is

incessantly governing and frequently punishing her children, and I will show you intractable children. If the mother will not govern her little ones so much with a red-hot discipline, but put herself more in their places, she will see the propriety of granting, and be more willing to grant, their innocent requests, and patiently to bear the rather noisy prattle of tongue and rattle of footsteps. Not an over-indulgent, but a cool, affectionate, conservative method is far more effective for good than the severe and austere. Kindness with firmness; innocent stratagems with sagacity; sweet disposition with maternal love put in practice; *governing*, yet seeming not to govern—these are forces which no mother or father can afford to be without. The aim should ever be to teach children to govern themselves. Failing in this, how can we expect them to grow into self-governing men and women? If they do not become that, who will be responsible for their conduct in years to come? To what fearful consequences may lives destitute of self-restraint give birth! How fearful parental responsibilities! Nevertheless, young, middle-aged or old men and women, in the face of those responsibilities, feel no obligations to study the moral government of children.

3. Fault-Finding—Sharp Words.—As nature overlooks trifles, and raises her protesting voice only in the presence of impending physical danger, so parents should likewise do in moral danger. This will preclude fault-finding and sharp words in rectifying the small seeming faults of children. I say *seeming* faults, for child nature, so exuberant and overflowing with animal spirits, *must* and *will* keep itself from self-destruction by bursting or withering. The process involves scribbling with the ink, marking the windows of frosty mornings, ornamenting the fence, school-books—everything, in hieroglyphics; coming into the house with muddy feet, waking baby with his uproar. Some of these are trying to the taste and patience of a cultured mother, and it is little wonder if sometimes for a moment she loses her sweetness, and uses sharp words. But what good can incessant fretting and fault-finding do? It will certainly do harm. The better method of cure, where cure is demanded, is patient expostulation, pleasant ridicule, and a little time. We shall not have

our children always with us. They will go from us, or we will go from them. Let us not do that upon which we shall look back with regret and shame, and withal make our children morally obtuse. We *shall* do what we *ought* to be sorry for, unless we often permit childish acts with much allowance, and know that many a little prank is not an intentional wrong, though it may seem so. Thus when a boy goes out and slams the door, or leaves it open, it is more than probable that he feels his business so urgent that he has not time to close it; or if he closes it, not time to shut it softly. This habit should be corrected, for if the door needs closing, it is the boy's business when he opens it to close it in a proper manner. This is the more so, lest a habit be formed of neglecting some business while doing another. In correcting the fault, how much more persuasive is it, or how much sooner will it be cured if the mother calls in an impatient, incisive tone, "*Come back this moment and shut that door, or I'll box your ears,*" than if she were mildly to ask the boy not to slam the door, or please learn always to shut the door after you?

Great harm will usually result from this unhappy mode of government, because children will catch and absorb this spirit of fault-finding and surliness of temper, and your home-life and theirs will be made one of snarling contention. The education of examples most surely exerts a powerful influence over the health and character, and consequently over the success, usefulness, and happiness of every human being. Emphatically is this so in the case of children who are always doing what they see done by others older than themselves, and saying what they hear others say. Unfortunately, bad examples teach faults as readily as good examples virtues. What a pity it is that parents do not possess an acute and abiding consciousness that their words and deeds are continually influencing and educating their children for good or for evil. In the management of children, firm words are sometimes needed; cross words, never. A word seems but a mere wave of sound; an act but a little ripple on the wave of life; but it should be remembered that no man or woman can speak a word or do a deed which has not an influ-

ence; that no human power can stop a wave of influence when once sent forth. It is therefore the inestimable duty of parents to so direct their own words and acts as to encompass the children with only such influences as are calculated to properly bias their dispositions, morally educate their intellects and hearts, and so establish their characters that no light temptation can shake them; that in all life's activities they shall stand firm as a rock, in the nobility of manhood.

4. Threatening Children.—If nature threatens punishment, she means just what she says. Not always so with woman. For example, some impatient mother is heard to exclaim to her child, in reference to some childish misbehavior: "If you *ever* repeat that conduct I shall punish you severely." It generally happens that he does repeat it, and very likely on the same day or hour that the threat went quivering and burning from the tongue. If that mother chastises the child, as she has said she would, and if she be a woman of tender sympathies, she will, in nineteen times out of twenty, be sorry for it. Sorry or not, the child is certainly made no better. If she does not inflict punishment, she has told the child an untruth, although, under ordinary circumstances, she would not tell a lie. Depend upon it, the woman who largely indulges in this mode of government will not only suffer from unrest or remorse, but will teach her children more or less duplicity, untruthfulness, disobedience, and destroy the natural, beautiful attribute of confidence and love implanted in children, through which they throw themselves upon their mothers' bosoms, and amid life's storms rest there with perfect trust.

5. Impartiality.—Nature does not allow transgressions in the infant which she disallows in older children. For example, if the youngest babe thrusts its finger in the blaze of a lamp, it is just as surely burned as would be the finger of a man of threescore years and ten, under like condition. Not exactly so with fathers and mothers. It is a very common thing for us to teach infants to say words and do acts, which seem cunning in them but not in the older child. It often causes much unnecessary trouble, annoyance, and unpleasant government on the part

of loving parents to teach the child to unlearn what they have taught the infant amiss.

6. FRIGHTS.—Nature never tells us lies to frighten us into obedience. I would be glad to speak as well of parents. The whip is cruel and prolific of evil. Deceitfully frightening children is no less so. Bugbear stories for the mind are like rods for the back. To tell a disobedient child that a "bad Indian," or "a big bear," will come and get him if he is not good, is very thoughtless, cruel, and full of evil. To tell him the "doctor will come and give him horrid medicine, or take him off," is no less so; and the more unwise, since it causes the little one to fear the doctor, and to fear him because he expects harm at his hands. What an encouraging state is this when the child is sick! when every touch of the physician's hand seems like the thrust of a dagger! The faith, confidence, and love of a patient, young or old, for his or her physician, are of great power in the cure of disease, and therefore of so much value that the truth of it should be imprinted on the minds of all, for their advantage, instead of being made a weapon with which to frighten children.

7. WHIPPING CHILDREN.—Nature has to do with us physically, and for our transgressions she administers physical punishment. We have to do with our children, in our government, morally; therefore the punishments we inflict should be moral punishments. If I say (as I certainly do, as a rule) whip not at all, I oppose a large and respectable class of people, who partly or chiefly rely on this form of government. They not only inflict flagellations on their own children, but give the schools the widest privilege to indulge in the same luxurious barbarism. Let me explain here, lest I be misunderstood. If my child is reasonably whipped at school, it is not for me to make him think himself unpardonably abused, nor for me to go into open war with the school. Such a course will be detrimental both to the school and boy. A reform must be brought about by awakening a popular moral sentiment against that form of government. A teacher who is at once inflexible, gentle, sympathetic, and sensible, while he needs no special limitations in this

matter, he needs no impending rod to force obedience. A teacher who *must* call the rod into requisition is presumptively unfit for his vocation. To chastise a man at a whipping-post is deemed, by most civilized people, an uncivilized act, an inhumanity of men to man. How does it come about that the whipping of a little tender child is a more civilized or humane act? Is it? If not, then what right have parents and teachers to apply the cruel lash to the backs of the little weaklings? Do men possess any legitimate prerogative in this matter? Do children have no right to claim parental kindness and protection?

A little boy was asked by his father: "You know, my son, what I am about to whip you for?" "Yes," answers the son, "I suppose it is because you are the biggest." That was a little impudent in the small philosopher, and yet it is philosophical. Is not whipping really a cruelty of a barbarous age, extending its hateful length to our generation? Was not its primeval origin in the brute strength of man against the weakness of children? Father, mother, you can flog a child with entire safety to yourselves, and you may use the shield of your strength safely. However, after the boy has grown so large that it becomes a question whether you or he is the stronger, you begin to feel coming over you a slight hesitation, born of personal carefulness and a sensitiveness as to whether you had better after all whip the boy into servitude!

To make a child good by flagellations is like making Christians through the fear of eternal torments. The fear of hell is not religion. Fear of the whip is not true obedience. You *cannot whip goodness into humanity*. Still, to many the clear-cut crack of the whip is music, and the great panacea for all the moral ills with which our own degenerate children are afflicted! "But I *cannot* manage my boy unless I whip him." Well, that is because you have never made up your mind to teach obedience without it. If you possess ordinary sense and goodness, and if you have not already made your boy into a degenerate son, I assure you that you have the requisite moral powers of government without resorting but seldom to physical coercive

force. If those powers are latent, it belongs to you to educate them, instead of causing your child to suffer for your own unwarranted neglect.

8. Disobedience.—There is little reason to dispute the proposition that in a large proportion of cases, the disobedience of children is either imaginary or the result of parental mismanagement. What I mean by imaginary disobedience is, when the child cannot obey, as when he will not, because he cannot go to sleep at the desire of the mother; when he will not, because he cannot refrain from crying for food or drink when hungry or thirsty, and the mother does not understand or is not ready to attend to his wants; when an obstinate child, being very angry, will not, because he cannot obey while in so great a passion. He cannot in the last case obey because his better feelings are temporarily and irresistibly overborne by the powerful mastery of his anger. Therefore immediate obedience will be very unlikely, unless his fear is made stronger than his anger. Here parents are often puzzled concerning their duty. Thus, when a child is in a rage, the mother requests him to do a certain act and he stubbornly refuses. What is to be done? The mother's request has gone forth, and if obedience is not obtained, the mastery belongs to the child, who will be likely to keep what he has gained. If chastised until fear predominates over passion, he will yield. This, however, is, physically, a dangerous experiment, and unavailing in moral beneficial results. Pernicious consequences will ensue, because the violence used will increase the strength and the venom of the child's combativeness, while the correct purpose is to diminish that propensity. The parent will, besides, feel strange and unsatisfactory sensations of unrest after having chastised the little one severely enough to conquer to obedience. A far better way to manage is to say to the child that we will let the matter rest for a short time. Let anger subside on the part of the child and calmness return on the part of the mother or father; then reason the case together, show him how wrong it is to disobey his mother, who does so much for and loves him so well, etc. Then let her ask pleasantly if he will do as she had requested. The little delin-

quent will not only do it, but be sorry and ashamed because he has been so naughty. Such discipline will develop the little fellow's reason and conscientiousness, and prove a lesson by which he will profit in the future.

9. CONTRADICTION.—Nature knows no contradiction. All her government is harmonious and supreme. So should be the government of homes. If children are allowed to contradict their parents, confusion will reign, instead of triumphant parental authority.

Keep in everlasting remembrance that to govern *well* is a most difficult thing to do. The parent who has a tongue, a voice, and muscles, can scold and chastise a child. So can brutes chastise their offspring. But the man or woman who would make government a success, must study the science and art of government and use cultivated mental and moral faculties in the practice of it; must exercise especially ingenuity, patience, decision, kindness, love, self-control, and *be* what their children *should* be when grown into men and women; must learn to discern the motives of the child, lest many acts which proceed from innocent exuberant spirits be ascribed to evil intentions. The method of government must be adapted somewhat to the temperament and disposition of each child. In unimportant matters no government is called for. Where government *is* needed, the requisite lessons must be repeated and repeated with the patience of Job.

METHODS OF EDUCATING THE MORAL FACULTIES.

Parents sometimes complain of the obstinacy of their children, and talk of the necessity of severe measures to break their stubbornness. A child's wilfulness usually consists in a strong will which has never learned to obey the dictates of reason. Do not attempt to break it by severity or any other means. Help the child to regulate and educate it. A strong will is an essential power in self-government, and for a successful business, social and moral life. The man who has a strong, well-regulated will, has *push* in him. But how is it to be educated and regulated? Educate reason and conscientiousness, and then the will be-

comes subservient to the judgment, the actions subservient to "*ought*." Stripes and other severe measures will neither diminish the will nor increase the reason or conscientiousness. Science and experience have proven that the exercise of every faculty increases its strength or educates it. For example, the memory is strengthened by repeated acts of remembering, combativeness is made stronger by repeated anger; so on through all. To make this psychological fact available in the moral education of children it must be remembered that parents are to use all the tact, firmness, patience, judgment, sympathy and love that they can command, but never rashness. I repeat, flagellations must be excluded almost entirely, and other severe punishments *mostly*, from the course of training.

It is taken for granted by many that certain of the faculties are wholly bad. Therefore they would apparently enter the brain with a pruning-hook and trim away these bad organs. Not one of our faculties is bad in itself. Not only are the faculties not bad, but we need them all. Combativeness, for instance, is an organ of self-defence, and in the business of life it *pushes* us. But what does it mean when a respectable man in sudden anger strikes another dead? It simply means that he has never acquired self-restraint, which he should have been taught. Then again, what of a man who deliberately murders another for his money? Should the pruning-hook cut that love of money from his brain? Not at all. It means that during childhood and youth, honest industry, conscientiousness, and all his higher faculties, should have been more faithfully cultivated and avariciousness perhaps *less*. So on through the list of wrongs.

The great object in educating our children therefore to be kept in view is to cultivate or restrain all the faculties, so that each shall perform its legitimate functions, and the *moral* reign supreme over all the rest.

To conduct moral education thus, the first requisite is that parents should be what they would have their children become. The mother's influence over her child for good or bad cannot be overstated. Science and experience are beginning to show the magnitude of her influence, beginning before the child is born,

and never afterwards severed. For the little ills and accidents of the child, the mother's loving kiss is the ready panacea. For little swervings from right—indeed in all moral training, if the training is according to correct principles—her magnetic love is a force of no puny strength. Therefore the mother ought to be the trainer of her own child, instead of adopting the very genteel (?) notion of delegating this business to a nurse. The gentility itself is really the other way. For what can be more charming than the spread arms, dancing feet, and cooing voice of a sweet little child answering the caresses of a young mother? What good can be as inestimable and enduring as a noble man or woman reared by a mother's hand, and a mother's pure, fathomless love? No living being can fill the place of her who is partaker of all the joys and sorrows of her child.

> "In Rome's majestic days, long fleeted by,
> Did not her mighty dames sing lullaby?"

And did not mighty men come of it?

> "But England's mighty dame is too genteel
> To nurse, and guard, and like a mother feel."

And England is filled with scamps and weeping mothers to pay for it. Oh, the greatness of parental responsibility! Surely all the mother's personal care, all her unfathomable love, all her instinct and judgment, all possible information as to the training of children, prepare her none too well for the great work she has to do.

Space will not permit me to take in detail every faculty and propensity; a few examples will illustrate the basis and the mode on which we are to work.

1. PREDOMINANT SELFISHNESS is common in both children and adults; and far more often found in adults than it should be. Can anything be done to reduce an over-large propensity to this when it exists in a child? Remember it is not the object to destroy, but to regulate selfishness. "We are selfish." Well, we ought to be, but not *over*-selfish. Now keeping in mind the well-established laws, that alternate exercise and rest

of the faculties of the mind increase the strength of those faculties, and that inactivity reduces the same, let us apply those laws. Your little girl is eating an orange. You ask her: "Will you give me a part of your orange?" She answers: "Oh, no, mamma, this is my orange." You say not another word to the child, but manage, the next day, to let her see you sucking the delicious juice of another orange, and the child will naturally ask you for a part of it. Now your turn of refusal comes—"Oh, no, my child, this is my orange." Then explain to her that you only repeat her own selfishness of yesterday; reason with her that "we must please one another." Any intelligent child will see that the reason is cogent, and that your denial is just. Then in a short time, while so much of the lesson is recollected by the little girl, let her see you eat something else she is very fond of, and the question will come again: "Mamma, please give me some?" You will answer, "Oh, yes, my darling, and you will divide with me next time, will you not?" She promises, and will almost invariably perform what she says. After such a lesson is repeated a few times, you will find the little girl's exuberant selfishness vanishing like a dream. The mere withholding of these little things, to be sure, is a source of keen distress, but the distress is mingled with the knowledge that you are doing justly, and for the child's greatest good. The dread of this ever present, purely natural penalty, forces selfishness into subjection, and subdues it to its proper working condition.

2. COMBATIVENESS is one of the propensities most easily excited into action, over-action, and wrong action. If your boy becomes angry on the slightest provocation, acts very naughtily, quarrels or fights frequently with his playmates, he has large, uncontrolled combativeness, and his wrong actions spring from this unrestrained propensity. Something must be done. But what? That is the great question. If the father chastises the boy, on the occurrence of every spasm of anger, as many fathers do, the same passions that make him ugly, or fight, are put into efficient exercise, by the chastisements; and that exercise, according to psychological law, increases the strength of those passions,

which are already too strong. Therefore such is not a proper mode of management. Not only is it not a proper mode of management, but one which, if persevered in, will so enlarge those passions as to lead eventually to fearful consequences. Besides, excitation of the violent emotions may cause disease, or even death, by determining an undue amount of blood to the brain. No, sir, violence here is not the cure. Savageness begets savageness, as like everywhere produces like. If you would not have such a boy ruined, your procedure must be somewhat as follows: First, if the boy is a child, you must, when he is angry, soothe the turbulent little creature by words of sympathy, kindly spoken; call his attention away from the cause of his anger—in a word give him no cause to get mad. Second, if your boy is old enough to understand it, proceed thus: besides the same kindness to him as to the child, tell him how wrong his actions are when angry, and why wrong; show him the nature and value of self-restraint; keep him if possible from getting angry by withholding the food which *feeds* anger; appeal to his higher nature. Repeat, and repeat the lesson, and if that boy is not an idiot, he will learn self-control, while his propensity to anger is starving itself down to its normal quantity.

3. Stealing.—In a child that has a strong propensity to steal, whence comes that propensity which gives every honest parent much solicitude? It proceeds from a strong desire to possess, combined with large secretiveness, small conscientiousness, and, in a great proportion of cases, with small reasoning powers. If the lash or other severe measures are relied upon for the cure, the probable effect really produced will be this: the child will be more careful to conceal his thefts, thus enlarging his secretiveness, one of the causes which makes him steal; but he decreases not one of the causes. The disposition to this fault can never be whipped out of a boy—*never*. The remedy consists in cultivating conscientiousness and causality, by explaining to him that the things he takes do not belong to him, but to others who have worked and paid for them. Reverse the case, and ask him how he would feel if others should steal his property.

Explain what the final results of stealing will be, and what sort of a man it will make of him. By continued repetitions of this sort, reason and conscientiousness will probably grow to that estate as to rule covetousness and secretiveness, and the boy will steal no more.

4. SELF-CONTROL.—Many men run by impulse. The animal propensities prominent, and the moral faculties deficient, they strike, if they get angry; cheat, if opportunity presents; lie, to win a purpose—move indeed like a ship without a rudder. Some scientific men tell us that man *must* act in exact conformity with his individual, mental organization; and that, therefore, he is not morally accountable for his crimes, nor to be praised for good deeds. Other men no less wise take exactly the opposite position, and assert that *every* man is a free moral agent, capable of unlimited self-guidance under all conditions, and hence wholly amenable for his deeds. Without entering the lists of controversy on either side with these far wiser men, let us take a practical view of the subject in hand—the moral culture of our children. All educated people agree that all the faculties of every child are susceptible of culture. If such is really the case, then the intellectual and moral faculties may be so educated and lifted up, as to *rule* instead of *being* ruled by the animal propensities. That is the power of self-control. That places a man in a position to be accountable for his misdeeds; places parents in a position to be chiefly accountable for the weal or woe of their children.

Intellectual culture has been treated previously. A few examples in this chapter represent the mode by which the moral faculties may be educated, and the over-predominant animal propensities reduced to their normal functions. These plans will, if followed, be successful in proportion to the perseverance manifested by the parents, and the natural organization of the child. In that same proportion the child will find that he is forming his own character, and that his will, directed by reason and conscientiousness, is the master that governs him.

But what about those children who seem lost to the higher sentiments? whose thoughts and motives are animal in the low

sense of the word? How can you appeal to the moral sense inherent in the higher faculties, when the child has no moral sense to appeal to? "What is the use of cultivating that land where there is no soil?" asked Mr. Thriftless of Mr. Thrifty. "Come and ask me ten years hence, and I will tell you," answered the latter. After the lapse of the years, Mr. Thriftless, happening again to pass the spot where the former conversation took place, looked up and exclaimed, "Are you plucking those great ears of corn from that sand-bank of years ago? Why, had you offered this land to me as a gift, I should have taken your words as an insult! How does this all come about?" "Simple enough," said the other. "I have been diligent in fertilizing this land; careful in the cultivation; kept it free from weeds, and that is all there is about it." It is unfortunately true that there are some graceless, godless children to whom there seems given no reason, or conscience or sense. Their brains are little knolls, fruitless of everything but sand-burs. Yet I believe that every child, however low, has somewhere in its nature a spark of good, which may be kindled if touched with skill. A little latent goodness—fine particles of rich soil mixed with the sand. These particles are, it is true, sometimes so dry and fine that they may easily be blown away or choked by the burs; or by careful handling, a constant enriching with firm yet kind words, patient and proper instruction, the sterile brain will grow richer and better by what it feeds upon, and ere long bear not great ears of corn, but beautiful characteristics of *soul*—not, perhaps, the most abundant and perfect, yet beautiful. *That grows men.* The great difficulty is, degraded children usually have degraded parents, for whose sins they and the world must needs suffer. But if it devolves upon you to rear such a child of misfortune, who seems to have no will of self-direction or right-direction, be not discouraged. For by a judicious mixture of restraint, encouragement and force, if force *must* be used, this same child may come to know that by *doing*, he may learn to do; by overcoming temptations and the exhibitions of his evil propensities, he may learn to overcome; by obeying the dictates of reason and doing right, he may learn to obey and do right, until at last the little reprobate will indeed become a new creature.

FORMATION OF PROPER HABITS.

Correct habits naturally proceed from a correct education of the moral faculties.

Here, as in everything, the child is most effectually taught by parental example, especially that of the mother. If we would have our children tidy, we must ourselves be tidy; if orderly, we must love order; if industrious, we must be industrious. We must be what we would have our children become.

Then *repetition* is necessary in the formation of habits. "How use doth breed a habit in a man."—*Shakspeare.* Therefore, to have your child learn such habits as you desire, cause him to repeat and repeat the acts or words which form them.

Remember the dispositions of children, even in the same family, are more or less unlike; that the discipline must be varied accordingly. It therefore follows that parents should make each child the subject of careful study. Having thoroughly learned the peculiarities of each mental organization, having found that praise is an efficient force to use with one, reason a force for another, persuasion for another, and perhaps coercion for another, go deliberately, earnestly, persistently to work, educating, developing, restraining, according to the mode suggested in the preceding subject. Thus if the child is over-passionate, care must be used not to stir up the predominant passions, since such exercise will enlarge and strengthen them, in accordance with the law relating to the growth of the faculties. While this subduing process is going on, the higher faculties are to be assiduously cultured, as already indicated.

Thus all the faculties of each child, independently of all the other children, are to be so educated as to know and perform their proper functions, having always in mind this central idea, that conscientiousness and the reasoning faculties are to be nurtured to that ascendency over all the others as to rule them and the child. This is implanting in and bringing out of a child the highest human excellences. This work is as arduous as noble, and requires on the part of parents more sagacity, patience, and goodness than is possessed by *every* one of us.

The disposition of men and women depends much on their

physical condition. If they suffer from dyspepsia or other chronic affection, though they may have brains and character, their patience and sweetness of disposition may even be inferior to their physical health. Another great reason why parents should be well. Rest assured that wherever an unpleasant, impatient disposition exists, whether natural or acquired, on the part of a mother, there will be disputing or wrangling where there ought to be graciousness and sweetness; for the whole household will be infected. A thousand pities! For if home is the place where faces are sour, where words are harsh, and where fault-finding and the rod are in the ascendant, then often will the children be driven out of the home, and what is good and noble driven out of them. Catching and retaining the scathing pestilence of the domestic breezes and storms, the boys, when they marry, will be, in a great proportion of cases, domestic tyrants; the girls, domestic shrews.

Another parental characteristic, important to success in the formation of good habits in children, is kindness. Many manifest toward children, both in and out of their own families, far too little real kindness, unmixed with over-indulgence. One of the surest indications of true humanity in man or woman, is that they love little children, and manifest continual examples of love in their presence. A great author has said: "When I see one stop in the street to pet a child, or soothe it when in childish trouble, or to give a flower to a modest little girl, I see in that man or woman qualities which can be trusted, for they are born of Heaven." He speaks truth. One kind word or act, even from a stranger, will sometimes give permanent bias to the formation of a child's character. How much oftener may this be done by the continuous loving words and acts of an affectionate mother!

One simple incident, seemingly of no importance, which occurred in the early life of the writer, is illustrative of the power of kindness. All have heard of the farmer, who, when he went to mill, always put grain in one end of the bag and a stone in the other end, to balance the grain when on the horse's back. One day, on being asked by the miller why he did not put part

of the grain in that end of the bag instead of the stone, answered: "Waall, my father done in that way, and his father done in that way before him, and what was good for them is good for me." Such is human faith in the good old ancestral ways. Now when I was at the ripe age of six to eight, I used to be sent three or four miles to mill; my grist astride the horse, myself astride the grist. My parents were not so far advanced in mediæval history as even to dream of the indispensable stone, and I used to get there without it. One day, on my august arrival, I found no miller in the mill, and therefore wended my way to his house in quest of him, where he was at his dinner. The miller's kind wife intuitively knew that children are generally and chronically hungry, and therefore anticipating my wants, she gave me a great warm biscuit, thickly spread with delicious honey. Having never seen the lady before, always suspecting that strangers were not children's friends, and that at last I had found an angel, I ate that biscuit and honey with far greater relish than anything I ever had eaten before—greater than anything since. It seemed to me that it and she who gave it had come down from heaven. This, no doubt, seems but a trifling act to the reader. Not so, however, to me, for though many years have passed away since then—I am growing old, and that saintly woman has long gone to her reward—yet she and her kind act are held in my memory as a something both human and divine, and I am the better for it.

In educating children in the conduct of life another thing is important: children should be made to feel that their parents know better than they what is best for them. If a child is thoroughly convinced that the father and mother feel a deep interest in his welfare and know better than he by what means the greatest good will come, it is a strong inducement to follow parental directions.

Another incentive to good conduct is praise. Many parents unfortunately are swift to censure, but extremely slow to commend. This should not be, for the love of praise is an innate attribute of human nature, which calls for its appropriate food, and its appropriate food is the meed of deserved praise. With-

out it you need not expect to get the best either in or out of a child.

The young *will* learn habits which, when thoroughly learned, obstinately live. It hence matters much what habits are formed. Not *all*, but many men and women are liars or thieves. Duplicities, equivocations, dishonesties in myriad of forms, are rampant everywhere, and the universality of them indicates wrong parental discipline. It is sometimes said that all children are liars or thieves—that these vices are born with them. That these assertions are not well founded, is attested by the fact that a child feels a consciousness of having done wrong after telling an untruth or taking that which belongs to another, which guilt should not be felt were the acts things of nature. The behavior of the average child also controverts the slanderous attacks made upon defenseless children. The moral faculties develop slowly in children, and therefore the child is more decidedly animal and more easily persuaded than the adult. The habits of thieving and dishonesty, which children of good parentage acquire and carry with them through life, are far more likely to proceed from imitation of example than from faulty organizations. They watch the insinuations, the deceptions, the exaggerations of their parents; they listen to the little thieving stories of boys who are their seniors; their imaginations are excited by the heroic manner in which those words of wonder are spoken. Is it a matter of organic deformity, then, if they follow the alluring examples so dramatically placed before them? For example, a neighbor owned, many years ago, a great many chestnut trees, which produced more chestnuts than he ever used. Some wild boys were wont to visit the tempting grove uninvited, and boast of their exploits and the grim indignation of the owner when he discovered his loss. Taking our seniors at their word, we little fellows were convinced that it would be a sharp thing for us as well as for them. A dark evening was therefore agreed upon in which to put our venture into practice. Having reached the Elysian field in good order, we climbed a tree, and were about to cut the stems upon which hung the forbidden fruit, when lo! the voice of something, or

somebody, or somewhat, "*Tu whoo!*" broke upon our alarmed ears with the seeming power of Gabriel's trumpet and sent us scampering home with feelings of the most timorous shame. The voice was not that of the owner of the prickly fruit, nor of the police, nor yet of Gabriel's trumpet, but that of a wakeful screech owl!—that and nothing more. This was my first and last attempt, or inclination, at stealing. Just how much of the credit of the cure is due to my noisy but adroit and grim teacher may never be known. Such is the force of example.

Again, children often form habits of untruthfulness or dishonesty by *innocent*, though thoughtless, example of others, and especially of parents. Mothers, who mean always to be exactly truthful, are likely to be careless in this respect in their dealings with children. "Mamma! mamma!" speaks a little girl, "will you please get my dollie from the high shelf?" "Yes, dear, soon as I finish this." When "this" is finished the mother neglects or forgets the child's request, and goes about some other work, until finally the child makes such an ado that mamma has to attend to her wants. On the part of the mother this is mere thoughtlessness; its effect on the child, however, is that of untruthfulness, and the little girl manages about in the same way when dealing with her playmates with the cogent reasoning of "Mamma does so, and it is a real nice way for me to do." It is on this basis of reasoning that the child begins by saying what she does not mean with little idea of the nature of a lie. The danger is, that she will end with the perfectly formed habit of exaggerating, equivocating, lying; and the astonished mother wonders why her daughter is so. O! the amount of ill we unconsciously teach our children.

EVIL COMPANIONS.—The habit of evil companionship is the mother of a long and dismal catalogue of vices and of crimes. In the moral education of children, therefore, success greatly depends on giving them proper associates, every one of whom should either be chosen by parents or be such as to meet careful parents' approval. In order to insure this, every father and mother must know where, how, and with whom their children spend the days, and especially see that their evenings are spent

in proper places, and that they are home at a seasonable hour. No words can express as powerfully as it deserves, the great importance of this duty, for upon how well it is performed may depend their health, life, salvation. We are not unconscious of the fact that every child should be so disciplined, that the future man or woman who grows from the child shall be able to stand alone, an independent individuality; but while under that necessary discipline, safety should be secured, and there is no safety in evil companionship. Tar and satin are not made to touch each other. The satin of a pure, innocent life may not be associated with the tar of evil boys and girls without more or less contamination. The surveillance required ought not to be discontinued when our children have grown out of childhood. Do you know dissipated New York and London? Are you aware that smaller towns are little safer? Do you know the companionship and the habits your son and daughter are forming and the moral perils surrounding them?

Fathers and mothers who expect or wish for the welfare of their sons and daughters are called upon by every tongue which speaks to or *in* the best human nature, to personally see to every detail of their habits and lives essential to the formation of irreproachable characters. When the inflammability of young people is considered, this may be deemed no careless task. An unassumed shyness and delicate modesty in a girl are her greatest personal charms. Beware lest she acquire a repulsive coarseness and boldness. Good home-influences, the highest home-life, proper companionship abroad, are her safety. What this bubbling, many-colored, good-commingled-with-evil world wants for the welfare of this generation, and of coming generations, and which parents ought to give, is men and women of strong, pure words, lives consecrated to perfect manners, to sacred law, and to exalted life.

Good Habits.—If the moral and intellectual education has been properly conducted, it will usually not be a hard matter to inculcate good habits. Even then two conditions are indispensable: 1st, a well-defined idea of what habits children, men, and women ought to have; and 2d, parents, whose habits are the

same as those they would teach to their children—parents who, with great patience and irrepressible perseverance, will continually discipline, instruct, and, by reiteration, will so *inculcate* those habits as to make them part of their children's very natures. Proper educating processes being thus given, the subject is thus reduced to the two above-named conditions, and there remains for me only to *name* a few of the habits which parents ought certainly to teach their children.

1. The love of order. A place for everything and everything in its place, is every day to all, young or old, an economy of time, and will prevent much impatience. 2. The love of truth. To teach a child that, parents must be truthful in every particular. 3. Neatness of dress and cleanliness of person. These are the first two principles of civilization. 4. Promptness in meeting engagements. One has no more right to waste the time of others than to pilfer their goods. 5. Decision and stability of character. No true manliness without them. 6. Good manners. The name alone is their praise. 7. Good sense and conscientiousness; that one may know and do what is right. We need to teach our children not only to *dare* to do right; but create a strong self-conviction that they *ought* and therefore *must* do right. 8. Perseverance; that when right, one "will fight it out on this line if it takes all summer." 9. Gentleness and sweetness of disposition; that one may give and receive happiness, and tread the paths of peace. 10. Virtue and chastity. They are better than gold. 11. Religion, the crowning heritage of life; the full fruition of which one will reap in heaven.

In the process of teaching the child good habits, it is not wise to make him believe that his smartness is incomparable; nor without discrimination to give him whatever he cries, asks, or teases for; nor to say in his presence that you cannot control him; nor to let him read poisonous literature; nor to permit him, evenings, to rove the streets at will; nor to allow him bad companions; nor to often chastise or severely punish him; nor to govern in too trifling matters; nor to have divided counsels of government between the father and mother. Be rather guided by natural justice and reason. Convince him that you know

what is for his best good better than he. Bend, draw him by the silver chords of sympathy and love. Ah! truly there is excellent glory, incomparable power for good, in that mother's love, which in all her conduct of life expresses itself in prayers, tears, and sweet maternal kindness. There is no less influence for evil in the want of a mother's love, as the following incident illustrates: "When a stern and dignified judge ordered a prisoner to stand up and offer objections, if he had any, to being sentenced to prison for a long term of years, the prisoner rose and said: 'I never had a mother to shed tears over me!' His words entered every heart in the great court-room. He was a rough, bad man, in the middle age of life, but every heart softened towards him as his lips uttered the words. He felt what he said, and tears rolled down his cheeks as he continued, 'If I had had a mother's love and a mother's tears—some one to plead with me and pray for me—I should not be what I am.'"

"Go speak to Jesus first;
Then to the child. Go let Him speak to thee
Who taught on earth in Judah's waning days
On mountain slopes, along the pebbly beach,
And on joyous billows of the sea.
Yes, in the closet hear His voice who spake
As never man did speak. Ask for His mind
Whose patience bore the burdens of the world:
Ask trustingly; the promise is to thee;
Thou shalt receive. Then meet the child as one
For whom the Saviour died. That ransomed soul—
God knows—it may be given to thee to lift
The little fledgling to an angel's seat.
O touch not heedlessly the chords that thrill
To gladness or to woe. Lay gentle hands
On things that tell the tale in other worlds.
Go, speak to Jesus, wait His answering word;
Then tell the trusting child like one who comes
Transfigured from the mount of prayer."

While the importance of the most diligent culture of the moral faculties cannot well be over-estimated, the anxious parent need not be discouraged by juvenile perversities. The moral nature of children, as a rule, is slow of growth, and therefore a

great amount of pure goodness may not be expected of a child. Let parents use the utmost vigilance to discern what faculties and propensities are over-growing and what under-growing, and bring them all into a harmony. A harmony, though, in which the intellect shall sway the animal propensities, and the higher moral faculties hold the balance of power. Parental work is sometimes difficult and discouraging to the best, and always replete with responsibility and with nobility. The responsibility may well blanch the cheeks of the brave, for without intellectual education "man is blind in a world of beauty; deaf in a world of song;" without moral education he is a "lost star" in the majestic universe of God.

AMUSEMENTS.

A large proportion of my professional life has been spent with children. In becoming familiar with their sufferings, griefs and joys, I have learned to love the little dears more and more, and become more and more acquainted with child nature. Upon this acquaintance, I have arrived at this conclusion: that the spirit of play is not only natural, but irrepressible. If by coercion it *can* be repressed, it is at the expense of developing evil propensities in the child; at the expense of thwarting nature in her plans, and evolving an unnatural child, and as ugly as unnatural. Therefore I am free to announce as my unreserved opinion that, under proper limitations, amusements are an indispensable force in the proper management of children; and that those amusements should chiefly be conducted at home.

The true mother's greatest, noblest, dearest ambition is so to guide her children that they may arrive at a maturity of unsullied usefulness, and of the purity of the lily. It is, therefore, of immense importance to her to be able to decide, and decide correctly, whether or not the plays, the games, the dance, will drive her darlings to giddy ruin. She may probably decide this question correctly by remembering those households of her acquaintance, in which the children were not allowed youthful mirth and frolic, and afterward out of which went an amazing proportion of dissolute sons and cynical daughters. Then after

looking on that picture, let her go to the homes in which games are allowed, the echo of romping feet and free, spontaneous laughter, and out of which mostly come healthful bodies, and souls so noble as to seem to purify the air wherever they go.

It is a well-established fact that amusements should be directed—not prohibited. On the one hand, they should not be made so limited and so stiff as not at all to answer the purposes for which they were designed; on the other, not so profuse and unwise as to spoil children for everything substantial. Every good thing must be protected against abuse. For instance, books are essential to intellectual culture; but there are kinds of literature abroad in the land which feed the mind with trash, and ruin the reader. Eating is necessary to health and life, but injudicious eating ends in disease. Fire is very useful, but not for children to play with. Dancing for a little time at home, where your guests are chosen, is, in my opinion, an exhilarating, wholesome exercise, and a beautiful art, teaching rough boys manners, and girls gracefulness; but promiscuous balls, where the whole night is given over to revelry, and where sensual men and disreputable women yield themselves, and invite the pure to the sensuous waltz and to its kindred round dances, are neither very elevating nor very innocent.

There always have been peculiar notions—not to say superstitions—and great diversities of opinion in regard to the proper freedom of children. I once heard a clergyman preach a sermon for the purpose of proving the sinfulness of *all* amusements, and even of laughter! "A Vermont clergyman has resigned, owing to a controversy among his flock, as to whether or not he had committed a sin in playing blind-man's buff." I have heard of households in which the strait-jacket reigned, and the children were not allowed amusements, but where fretting, scolding, fault-finding, and sour faces were much in the ascendant. In other homes, the children seemed to think of nothing but fun and laughter. These are specimens of extreme opinion and extreme foolishness. In the matter of amusements, as in most other matters, both safety and sense lie in the "golden mean." Whatever men may say or do, nature and art will con-

tinue in the utmost profusion to surround us with objects and incidents which will delight and make us laugh. God has created muscles in our faces and faculties in our souls that *will* and *ought* to respond to those objects and incidents. Children will play, and should be allowed to play amusing games. The man or woman, who succeeds in suppressing them, will suppress many qualities of soul that ought to live forever.

From childhood to adult age the animal spirits are especially exuberant—always overflowing or ready to overflow. If imprisoned by severe parental restraint, and the life is not so twisted out of the subjects of restraint, be cautious, after such boys and girls pass beyond parental control, lest destruction follow in their wake.

Amusements should be *regulated*, not *annihilated*. They, in great part, should be at home under the eye of the mother; and the mother should feel herself to be under the all-pervasive eye of God. If it is right for a boy to play games, or a girl to dance at all, is it not right to do so at public places where games are played and dances danced? It were quite unnecessary either to ask or answer this question, only for the miserable fact that many by their actions answer it in the affirmative. The simple fact that a place is a public place of amusement is sufficient evidence that bad boys and dissolute men do congregate there, and that cigars and intoxicating liquors are not far off. The simple fact that a dance is a public ball is sufficient evidence that disreputable girls and boys are there, going to the bad. If parents of respectable sons and daughters suppose that the correct in habits and pure in heart can habitually mingle in such associations with entire safety, I assure them they are very much mistaken. Safe amid all the influences of those sloughs of destructive corruption? So safe, sir, that almost every frequent attendant *must* and *will*, in a greater or less degree, surrender purity of character. It is something strange that so many good and wise parents do permit their children to attend such places. If even one among so many sees safety there, his spectacles must have an exceedingly delusive focus.

It is strange, and as true as strange, that even the "genteel"

public places of amusement should have any attraction to a respectable young man. Perhaps no one at first can say that he is delighted. He is half-disgusted and half-ashamed at the beastly scenes and unchaste words he sees and hears. But there seems something not well defined that lures the animal in him, though his exact sensations defy analysis. While his feelings cannot be analyzed either by himself or anybody else, this much is nevertheless certain: that he endures, and in time swayed by the stern logic of human nature he patronizes and embraces.

> "Vice is a monster of so frightful mien
> As to be dreaded, needs but to be seen;
> But seen too oft, familiar with her face,
> We first endure, then pity, then embrace."

Many promising young men, when too late, awake to the startling fact that they have sipped of the poisoned nectar that bites like a serpent, and formed habits which enchain forever. And fathers and mothers are astounded at the fall of sons in whom they had placed so much confidence!

Innocent plays, games, dances, song, and well-directed sport generally, will aid in the attainment of a happy home, save the children from evil associates, evil surroundings, and give sufficient harmless outlets through which may flow the surplus animal spirits of the young. No parent need fear that harm will come from it. Do even the most long-faced and cynical wear eye-glasses of so strong magnifying powers as to be able to discern how destruction of character is likely to proceed from well-regulated home amusements and enjoyment? But they think they see habits formed which will lead them from home, and into bad company. It is nearer the fact to put this statement thus: if children are *not* allowed these privileges, they will break loose from home, as soon as they dare transcend parental despotism, and find bad society and bad reputation. Both reason and experience prove that the minimum danger is in those happy homes where correct, yet easy child-freedom is allowed and encouraged. Every married pair ought to make their home the most pleasant spot on earth, both to themselves and children.


Home
Amusements
R. CAMDEN

After supplying the home with the necessary apparatus, permit the children to invite their young friends to join in the sports. If the spirit move, as the Quakers say, it is a pleasant thing to see parents also partaking. Parents should teach the children to play honestly and pleasantly, to endure defeat with becoming grace, and try again. Learning thus to play with integrity of purpose, with good nature, and patience, the habits will abide when they go forth to business life.

Judging from every point of observation, I am wholly convinced that properly conducted home-games, plays, and dances are, 1st, harmless; 2d, a safeguard to the good name of youth; 3d, beneficial, physically, intellectually, and morally. On the other hand, if some parents have become so soured to all there is in life, except business and hard dollars, as to forget that they were ever themselves children, and so interdict the natural, innocent out-flow of child-nature to their children, they need not marvel if their daughters do become as cynical and as selfish as themselves, or if their sons do, in spite of the severest parental restraint, sooner or later break the unnatural bands which bind them, and go to freedom and to ruin—wrecked upon the shoals to which they most naturally float.

If parents are invested by nature with the requisite authority and force to lift their children to, and lead them in physical, intellectual and moral health, and grand development, it is their duty to keep in memory that they are dealing with flesh, blood and soul; that the flesh is as sensitive of pain, and the soul of pleasure as their own. They should therefore constantly remember, that the force they use should be efficient, and yet a quiet, sympathetic force. The words and the deeds of the mother and father are certainly for good or for evil, according to the character of their words and deeds, and of the woman or man behind them whose soul they express.

THE CONDUCT OF LIFE.

HOME MEMORIES.

"How oft at twilight's sainted hour,
Fond memory will come,
And guide us over the threshold
Of our old happy home;
Where child-fancy painted pictures
Of stately hall and dome,
And reared the airy castles
In the old happy home.

"Our father smiled so proudly
As he held to his breast
His young and cherished offspring,
His blessing and his rest.
And he spake dear words of kindness
To us as we would come
Smiling in our joy around him,
In our old happy home.

"And our mother's voice ascending
On the sweet balmy air,
As she sang to us at evening,
Seated in her arm'd chair.
And she told us too of heaven,
Where sorrow ne'er will come,
When parting, that we must meet her
In that bright, better home.

"Now, since we have wandered far,
Silent mem'ry doth come,
And we gaze upon this picture
Of the old happy home;
And we shut our eyes and listen
Till angels seem to come
And tell us, 'that was Elysium'
At our old happy home."

. . . . .

"Headstrong, determined in his own career,
He thought reproof unjust and truth severe.
The soul's disease was to its crisis come,
He first abused and then abjured his home;
And when he chose a vagabond to be,
He made his shame his glory, 'I'll be free.'"

. . . . . .

"Ah, then how sweetly closed those crowded days!
The minutes parting one by one like rays,
That fade upon a summer's eve.
But oh, what charm or magic numbers
Can give me back the gentle slumbers
Those weary, happy days did leave?
When by my bed I saw my mother kneel,
And with her blessing took her nightly kiss;
Whatever time destroys, he cannot this;
E'en now that nameless kiss I feel."

So say the poets, and so feel we all. For the old home memories are sad, regretful, contemptible, or sacredly dear to us in proportion to the quality of the home influences, and of our own original natures behind those influences. In the same proportion, the remembrance of our old home—the scenes, acts, words, griefs, joys, which then and there interested us—seemeth a separate existence from which forever proceeds a current that fills, a force that sways and directs our destinies for evil or for good.

Not to make a fine analysis we will consider a few of the criminal and not criminal, moral and immoral, considerate and inconsiderate, wise and unwise conditions and relations of life, which may interest both sexes of all ages.

My young friends, if proper parental influences have worked upon and through your favorable organizations so thoroughly as to imbue your minds with good principles, your manhood will probably commence under auspicious skies. Those home conditions and your organizations reversed, what then? Are you really content listlessly to pass along, and make life contemptible, villanous, and a failure? Is it not possible for a young man, however vile, to perceive in a practical manner that there are some laws of equity in the unwritten code of ethics among men which he ought to respect, or has the word "*ought*" no meaning to him? If no meaning, he had better create a meaning, or hang a mill-stone about his neck and cast himself into the nearest river, for a decent world has no use for him. What will he *do* and *be?* are questions which demand immediate, definite answer—an answer due and *true* to the best

humanity. He *must*, if he would not be a building of God in ruins, put his foot down on the solid earth, turn his eye and heart toward an upright life, and with the utmost effort of will transmute the base metal within him into gold.

It is much the fashion among the mean, if they are educated, to be highly respectable in the way and manner of their misdeeds. They would not for kingdoms blow up a bank-safe or rob a hen-roost, but be crafty and more polished in craftiness than *that*. If defaulters, swindlers, or even murderers, smoother names than these must be applied—no rough untutored crime in their constitutions! Young man, if you are entrusted with another man's money, or public money, and fail at the proper time to return its equivalent in kind, it is more than "a little irregularity"—reason it out as you may, it is morally a theft; yes, sir, *more* than that, a theft and a breach of trust. If, in any transaction, genteel speculations, be they polished as the Damascus blade, whether in Wall street by which you make a million, or in a horse trade by which you make five dollars, it is all the same—a coarse dishonesty, worthy only of a Shylock, and should be called by no more respectable name. It is quite time that the world look upon fashionable crime, and fashionable criminals, and fashionable wrong in a different light from what the world is wont to do.

Bad habits and the disposition to wrong-doing *grow*, and their growth is beautifully illustrated in the following passage from the works of Jeremy Taylor: "For so have I seen the little pearls of a spring sweat through the bottom of a bank, and intenerate the stubborn pavement till it hath made it fit for the impression of a child's foot; and it was despised, like the descending pearls of a misty morning, till it had opened its way and made a stream large enough to carry away the ruins of the undermined strand and to invade the neighboring gardens; but then the despised drops were grown into an artificial river, and an intolerable mischief. So are the first entrances of sin stopped with the antidotes of a hearty prayer, and checked into sobriety by the eye of a reverend man or the counsels of a single sermon; but when such beginnings are neglected, and our religion

hath not in it so much philosophy as to think anything evil as long as we can endure it, they grow up to ulcers and pestilential evils—they destroy the soul by their abode, who at their first entry might have been killed with the pressure of a little finger."

But *criminals* are made by a long course in the school of preparation, often commencing while the child is in its cradle. Take, for instance, the barbarous crime of murder; one does not jump at a single leap from innocence to the deed of blood. Young C., in most respects a reputable young man, "permitted his angry passions to get the better of him, and he killed a boy with whom he had a petty quarrel." C.'s sins did not commence when he murdered his victim. He had previously and quite too often permitted his angry passions to get the better of him. In childhood parental mismanagement had acted upon his combativeness and destructiveness in their chilling preparation. In youth these propensities had too often overruled his better nature—"sweat through the stubborn pavement" before the culmination of the awful crime.

Very few boys, when just entering on the down-grade that leads to crime, have the remotest idea that they are ever to be real criminals, and their souls would be shaken to their most profound depths were such result predicted. Were they to take time to give the matter thought, they surely might see their own danger and downfall in the fate of those who have travelled exactly the same road. What if you were not born with the most favorable organization? What if your parents have proved remiss in your education? All the more should you now study your own nature and put under surveillance and control the overendowed and overweening propensities of your brain, which as surely as the sun shines to-morrow, are leading you on to wrong and to crime.

But if your brain is well balanced, if your education has been in every way correct, it still may be presumed that you, as with all of us, are not quite perfect; that, more than older people, you are exposed to this danger by reason of your youth, your good principles are less firmly rooted, and consequently more easily

uprooted. Your interest and earnest desire are to make life a success, to love truth and right because they *are* right—because the word "*ought*" has to you its true significance. Self-culture is therefore an essential principle in your daily mental food. Culture of self-control is to your moral life what self-reliance is to your business life. The tree which has stood exposed and alone for centuries, rocked amid the hurricanes as well as the gentle breezes, has taken deeper root and broader base. So must a young man stand amid the storms and temptations of his young life, shaken if he must be, but not uprooted, controlling, subduing, toning down, directing his overgrowing passions, building his character the while on a firmer and broader basis by cultivating and developing principles of honesty, of justice, of right, and of love.

Whether your principles are good or bad this much you should fully comprehend: that however often you choose to fall back upon your father's or mother's faults to find an excuse for your own; however true it is that the whole creed of your parents has been, "readin', spellin', and spankin' is what makes good men out of bad boys," every young man is a distinct individual who must stand or fall alone as one personal being, and therefore it is for him to accordingly shape the conduct of his life.

GOOD AND BAD TRAITS OF CHARACTER.

Character.—As no man's character is entirely perfect, neither is any man's character wholly imperfect, although sometimes quite near it. However unsullied a man at first sight may seem, close acquaintance will discover some dark stains that partially obscure universal brightness. However dissolute, desperate, totally degenerate a man may appear, scintillations of something better may be discerned through the general darkness. There is so little charity in regard to some matters in this world, that if one performs certain deeds, or fails in certain directions, especially if the luckless transgressor be a woman, we are apt to feel that we alone are good and strong, and to thank God that we are not like that unfortunate one. However unwelcome the fact

is, all average men and women are strong at some links of their character, but more or less vulnerable and frangible at others. If certain points of your character or mine are assailed, they are found as tough as the young ash, elastic as a rubber band, and how we glory in our strength. When temptation besieges other links of the chain, they snap and break like a dry pine stick—we fall, and few are so sympathetic as to show us pity.

It is for us all to become intimately acquainted with our weak and perverse characteristics, and train them into strength or into their proper functions, saving them the while from ruthless temptation. But we cannot see ourselves as others see us. We therefore need to be placed under the severe criticisms of strangers, under the sincere advice of friends. Much greater, generally, is this a necessity with inexperienced young men, both at home and when they first go out into the world, harnessed, but not trained into harmony with the manners and the usages of good society. They find then that while in one sense they must stand or fall alone, in another they should give and receive advice and criticism—"help one another."

IMPUDENCE.—One should be "a man of parts," certainly, but he should use his best endeavors so to educate his mind and heart that the *sum* of those parts shall make a respectable and harmonious *whole*. Thus educated, he will not find himself either as man or boy, possessing certain traits so bountifully as to make him shallow. For instance, a common exuberant monstrosity with which many boys just opening into manhood are encumbered, is *impudence*. It is not always of long duration, but unfortunately for the grace of mankind it sometimes inheres tenaciously. The following anecdote so tersely expresses the nature of this *aged* practical impudence, that I quote it: Says Mr. A. to Mr. B., "Here's your old rotten wheelbarrow. I've broke it usin' on it. I wish you would take it and mend it, caze I shall want to borrer it this afternoon." In budding manhood this ungainly characteristic is not often connected with business transactions, nor impudence given so often to friends as to strangers. It does not arise so much from a wish to give insult as from the desire of displaying what they call sharpness. Not

having lived long enough, nor seen enough of the world and of men, to convince them that they are not the wisest of their race, their rough edges are not ground down. The following will explain one of the many similar ways in which they use their tongues to silly purposes. Two or more young men meet a stranger on the road, and one of them, with the characteristic bravery of his kind, says: "Captain, how far is it down this way half a mile?" The stranger, conscious whence the silly question comes, either meets it silently, leaving the questioner in the full belief of his own superiority, or else answers perhaps somewhat in this manner: "The sharp young man that you seem to be, should know." While this sort of silliness lasts, it is nauseous; fortunately, repeated close contact with far wiser men than themselves, will usually teach them that they "think too little and talk too much."

Conceit.—Superabundant self-conceit is not a part of character which it is desirable for a young man to retain, but which he often has. It is said that Judge Lucas, of St. Louis, once was asked, by a greatly self-conceited young lawyer, how he liked his little effort of the day before (referring to his speech)? The answer was scathing, and, as may be presumed, rather telling: "Ah, you are the young gentleman who addressed a jury in my court! Yes, yes. Well, sir, your speech reminded me of a little yellow dog I have at home. When he wants to lie down he makes a circle, round and round he goes half a dozen times or more, and then lies down at the *very place he started from.*"

The self-conceited young man who has not sense enough to find out that there are some things under the sun he does not know, better find his true place among men by ways which seem rough to him, than not find it at all.

Self-conceit is apt to begin before manhood. At the transition period of a boy's life, a kind of youthful shallowness often appears natural, and which the possessor thinks wisdom. At this period life seems a delightful romance, and all that glitters gold. With many nothing seems more natural than to make a display, to reach after fanciful fruitions of life, and the imaginary gold at

the end of the rainbow. Inexperienced in the real facts of actual life, they view the whole, except the valuable, as a glorious enchantment. Though their magnificent ideal world is intersected by many roads, leading to varied goals, all surrounded by dangerous, open-mouthed snares, all to them seem splendid paths to peaceful bliss.

BAD COMPANY.—Viewing life thus, it is not strange that the average boy is more strongly allured by the flashing paraphernalia and gay colorings of falsehood, vice, and pernicious habits, than by the soberer truths of real life. Thus he sees other boys and distinguished men smoking cigars, and he is inclined to imitate the highly genteel practice (?). He knows of others who frequent public billiard-rooms, gilded and perhaps ornamented with questionable pictures. *That* is, he imagines, the place to display a cigar, and to find a realization of one of his elysian day-dreams! He hears others swear and use unchaste words, and thinking it *manly*, he soon learns practical lessons in that, even to a conscious imitation of the veteran tone. He learns in a similar manner to drink alcoholic spirits, thoughtless of the fact that they are spirits which lead, draw, entice, drag one to intemperance, which burns the manhood out of one with unquenchable fire. A boy cannot learn too early that to imitate such practices, or to practice such vices, is neither smart, safe, nor wise. It is indeed very silly, and exceedingly dangerous to all good prospects of life. All older than he are fully aware of it, even those whose examples he follows, though they entice him. Shame to those who tempt the young to take the road that leads to manhood's ruin.

It is an old saying that "He who dances must pay the piper." Cannot sensible boys or young men in some manner be made to understand the simple fact that they must pay, and pay *dearly*, if they dance to the music which thrills the passions and puts innocence to shame? Do you, my young friend, wish to indulge in those intoxicating drinks and scenes, and those licentiously delicious feasts of games and of love either in low places or pictured halls, to be changed by-and-by into horrible forms? Emerson has said, "Let no one quit his belief that a pop-gun is

a pop-gun, though the most ancient and honorable of the earth should affirm it to be the crack of doom." This odd, sensible sentence, often so applicable in the affairs of men, is no less so when transposed thus: Let no one quit his belief that the crack of doom is the crack of doom, though the most ancient and honorable of the earth should affirm it to be a pop-gun. For example, we take the emblazoned signs along the business street: "Billiard Hall," "Sample Rooms," "Board of Trade," "Dancing Rooms," etc. Let them be called "pop-guns" with all human vehemence; they are usually, though not manifest to the eye, no less than grog-shops, houses of ill-repute, low and dirty, or gilded and pictured, flaunting under more comely ensigns, where men enter erect, but a little on the sly, dance the dance of death, and then come out all awry and very loose! Where boys and young men go, often innocently, to hear enticing words and see the "jolly" scenes; in due time they sip the inviting nectar whence shall come little imps in the exquisite forms of the queens of love to hold the poor young man in intoxicating dreams, until at last the sudden "crack of doom" shall awaken him to the humiliating consciousness of the cost of dancing to the voluptuous music of the fairy piper. My dear young friend, do *you* frequent such places? Are these the places to which you *ever* go? Do you really want to become one of those nuisances who, if not ignorant, are generally idle and dissipated, lounging at saloons and brothels, betting at horse-races, wearing fine clothes which are never paid for—a worse than useless member of society? If you do not shun these places your footsteps are tending to this, and will probably give occasion for your parents and your friends to look upon you as that bright boy of great promise and full of pretty ways, but now a red-nosed, bloated, vacant young man. Do you really wish to place yourself in the position in which your father's interrogatory shall be, "Where, alas! is the honest, intelligent, efficient citizen that should have come from my promising boy?" Would your mother's melancholy moan of her sympathy and love, too deep for tears, be sweet music to your ears or tranquillity to your soul?

Bad deeds will fly as on the wings of the wind: they will not

be hushed to stillness. Lost to your parents, and to the public's good opinion. Is this a happy position in which to be? "Don't care for public opinion?" Surely when a young man assumes a fast style, "lives around loose," and boasts his recklessness of public opinion, he is treading the stepping-stones to ruin, and needs a thorough turning round and setting right. I am writing to those who need be reclaimed and to those who need to be admonished; what boy does not need the latter? For the strongest and best, if as good, is not as strong as he is inclined to believe.

But you affirm that you must see life and know the ways of the world. A wise determination if properly directed; the ways under consideration are very poor ways to wisdom. My foolish fellow, the roads to a noble and lofty life do not lead through the haunts of evil deeds or debauching love. See life and the ways of the world, indeed! Would you not like to take your sister or mother along to your sight-seeing and knowledge-reaping excursions? Are they proud of what you are doing, and seeing, and learning? "No?" Bless you, why not? Are they not as pure and almost as wise as yourself? And are they not as highly respected by the better classes of men and women? You remember, no doubt, the little box once presented to you in the lid of which you were told you would see a monkey, and upon raising the lid you saw—yourself! Look upon that lid now as you are "seeing the ways of the world" and searching for *your* ideal life.

A young man who really desires true manliness of character, and to make the world better for his having lived in it, in *some* way should be made to realize that *moral associates and good society are always safe;* that *immoral associates and bad society are always unsafe.*

It is hard for many gay, thoughtless boys to understand why they need be so particular in their associates. Even a small departure from what they know to be strictly right may seem to them of very little consequence. That is a dangerous error. For in the mental and moral, as well as in the physical world, very slight variations of association often make a vast differ-

ence in resultant facts. For instance, starch, as an article of food, seems very different from sugar; but place it into the mouth in companionship with saliva and a portion of it becomes sugar—both innocent foods. Now, associate sugar with certain other chemicals and the sugar is converted into alcohol, a substance very unlike the original, which causes so many "snakes in boots," so many woes, and so much mortality among men.

A piece of charcoal is carbon; but a piece of carbon with a little different association of particles is a diamond.

When a young man says he is going to church they are pure words to say; but if profane words are added, the purity becomes defiled.

Love is the highest attribute of man or woman; but when coupled with overruling lascivious desires, both love and the lover fall from imperial heights, and the diamond is changed to common charcoal. So, however moral a boy may be, or however good his intentions at the commencement, he cannot mix his morality and good intentions with those that are evil, as with evil boys, without danger. He cannot habitually do so without contamination. He cannot dip tar with his fingers without blacking them. There *will* in such associations be an interchange of elements—a mental and moral coalescence, a moral degradation—and too late the knowledge will penetrate him, like the shock of a thunderbolt, that the thoughtlessness, carelessness, or the wilfulness which have lead him to questionable associations, does really end in degeneration of character, sorrow, and shame. Behold the peril.

> "Good name in man or woman, dear my lord,
> Is the immediate jewel of their souls:
> Who steals my purse, steals trash; 'tis something, nothing,
> 'Twas mine, 'tis his, and has been slaves to thousands;
> But who filches from me my good name,
> Robs me of that which not enriches him,
> And makes me poor indeed."

Temptations of Strange Places.—Young men who go alone from one city to another to reside, or to attend school,

especially those who go from the country, are in greater danger of forming bad habits than those who remain at home. Parents who have never been personal observers of the fearful danger, and the difference in the danger as above mentioned, cannot well understand the full force of the statement. At home, young men are continually under the moral restraining force of parents and friends. Abroad this force is broken by distance, and boys are apt to feel under no obligations to anybody, and consequently so often give themselves over to unlicensed freedom. "Young America" is always glad to receive fresh recruits; and "will feed them with honeyed words, and yet conceal a dagger under a laugh;" will allure them on *so* smoothly in ways that lead from innocence to ruin; and they are in a favorable condition to be thus led. A young man who goes from home, if he would be safe, must clothe himself before he goes with the strongest determination to do right, and possess a great deal of moral courage during his stay. The following simple narrative, drawn from real life, so well illustrates this, I will give the substance of it. Did you, young reader, ever stop to think long enough to be aware that you wield an influence over every one of your associates, and that every one of your associates wields an influence over you, which will endure as long as the mind endures?

Tucker, Fernald, and Albert, strangers to each other, went from their several homes, to attend lectures at a medical college in a great city. As it happened, they took board at the same house, and occupied the same suite of apartments. Albert, at home, was a wild, reckless young man; away from home influences, he was not likely to be better. The other two were, at home, moral young men with unexceptionable habits. As time passed, Albert was absent from his rooms to a late hour almost every evening; while the other two were where they ought to have been. Matters continued thus for a few evenings, when Albert said to the others: "Now what's the use, boys? you might just as well go out and enjoy yourselves, as to stay here continually, and die of physical inactivity, and mental stagnation, or the hum-drumming over your books." "Where shall

we go?" they ask. "Why, go with me and I'll show you fun." The others, "Where is that?" "Well," says Albert, "we'll go down to the dance rooms, at No. — B. Lots of pretty women there. Everything first-class, and we will have a glorious time." After further inquiries and replies, Tucker (who by the way had a young, accomplished, but absent wife, whose pure poetry was in good repute) says to Fernald: "We are not getting enough exercise and recreation, for a fact—we better go down." And they went. The rooms were brilliant; the music delicious; the girls were voluptuously attired, pretty and bewitching. Tucker and Fernald looked on with bewildering interest.

They were there again on the following night—indulged a little in the mazy dance, and each escorted a bewitching beauty to a table and to the wine. They attended nearly every evening—the attractions became stronger and stronger—they entered step by step, deeper and deeper into the enchanting mysteries, and finally experienced the pollutions which wine and women could give.

At the next term of lectures, another young man, a stranger to the other three, found his way to the same rooms. This young man, Almid by name, learned while a child to trust a pure, loving mother, and in his manhood had not forgotten her influences. He soon became aware of the character of his chums, but treated them with all respect and urbanity. He read, as was his habit, a chapter or two in the Bible before retiring at night. Yet if one or more of his room-mates happened to come in while he was reading, he would suddenly put his Testament into his pocket. He felt, from the first, ashamed of his cowardice, and every evening still more ashamed until finally he said to himself: "I'll be a man, if it causes an earthquake." After that he dared do right without fear or shame, but not quite undisturbed, for soon Albert said to his other two friends: "Almid is a good fellow, but altogether too pious—I'll put a flea into his ear." On the following evening, in the way of executing his resolve, he says to Almid: "We like you well, and we want some good of you. Besides, what's the use of your

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sitting here evening after evening, and studying your eyes out and your health away? You will not live half your days. Come with us to-night and have a pleasant time. A company of nice young ladies will do you good, make you feel better, make you healthier and wiser. Come along, and we will pay all your expenses." Almid calmly answered: "I am obliged to you for your good-will and interest in me, but I take regular and pleasant exercise daily; visit the park, and different parts of the city, and see a great many things which amuse, and a great many that interest me. My health is good, thank you, and I enjoy myself very much without a single regret. Please try MY way and go with me, and I will gladly do my best in the interest of your enjoyment and recreation." Almid went quietly on his own way; the others also went on theirs, with a little impatient disappointment to be sure, but they had to "grin and bear that." After a time, however, Tucker and Fernald began to gather a few of the early, bitter fruits of their pleasures. Then they began seriously to reason with themselves, and compare their own lives with that of Almid. They saw the difference, the baseness of their own deportment, and the excellence of the other, which led to their decided and enduring reform. Albert went to ruin and to an early grave. Thus Almid did indeed occupy the same rooms and physically breathe the same atmosphere with the others, but morally he *would not* mix with them any more than oil with water. His own personal influence we have seen.

A young man from home, a stranger in a strange place, feels the need of acquaintances and of sympathy. Why are we so unmindful of strangers within our gates? Why do we not take them by the hand with that cordiality which will make them feel they have friends among strangers who will help them along in a noble life? The dry fact is this: if a young man, a stranger in the city, attends church with the expectation of finding friends and a kind greeting, likely he will be seated, if seated at all, among an obscure class of people who are stowed away into corners—a class different from that with which at home he has been in the habit of associating; and instead of

receiving a cordial welcome by the rest of the congregation, or any part of it, he will receive a severe letting alone. What is he to do? What indeed will he be *likely* to do if the better circles *will* entirely ignore his presence? "We have never been introduced." If respectable people insist upon halting at a point of etiquette as silly as that, we need not wonder that young men, who are social beings and not as firm as the hills, do so often break the dismal solitude by forming the acquaintance of those who with outstretched hands are ready to receive them—the gay, but not the innocent. One cannot well associate with that class of young men without doing as they do. Is it therefore strange if he begins to smoke cigars, that most fashionable enfeebler of young manhood; next, to play at games in fashionable places; next, to swear; next, to drink; at last to do other disreputable acts, and end in the penitentiary, or the grave?

Drunkenness.—When we consider the various forms of intemperance which such associations create, and that our own cold austerity is responsible for some proportion of those associations, our cheeks ought to blanch, and we ought to do our duty better. Intoxication is the worst form of intemperance, because the habit is so prevalent, and so disastrous in its results. For its Physiological and Pathological effects, I refer the reader to Dr. Carpenter's excellent work on that subject. It is enough for our present purpose to know, that the excessive use of alcohol in every form, destroys man physically and morally; that it is the serpent that twists its deadly coils around its victims, and holds fast till they go down in the slaughter; that the lives of thousands of young men and business men thus go out, and other thousands scourge the world as with whips of scorpions; that it is a charmer into whose insatiable maw young men easily, thoughtlessly and almost unconsciously glide. While our refined ladies place the cup holding this serpent in disguise to young men's lips on New Year's, or any other day, we cannot say that the dissolute alone lead young men into this fearful whirlpool of alcoholic depravity, insanity, death.

Drunkenness is capable of creating the meanest vice; of annihilating all virtue, and of murdering the drunkard. Did you ever notice how soon this habit takes true manliness out of a man? Did you ever behold him going down and down, leaving the companionship of temperate, manly men, and clinging to the low? Did you ever see how his constitution begins to totter, and how soon the grave swallows him up, a poor, forsaken creature?

It often seems strange to the temperate that there should be any temptation or object in getting drunk. It is physical disease, confirmed habit that make it so. It seems *more* than that. Is there not some abnormal psychologic enchantment in it? As many colored jewels encircle a lady's finger, so is he who has formed the habit of intoxication, bound by what seems to him myriads of brilliants of changing and enchanting colors. All through his drunken delirium, may he not seem to sink, and rise, and climb into eternal labyrinths, and fall again into deep, dark caverns? Where, looking up he may behold in the dim distance, what seems to him a glorious paradise, which he feels he has the power to reach in triumph. But can he not comprehend that it is all a gathering darkness, and successive storms which come dashing down upon him, attended by horrible shrieks and sudden thunders, all—all a pitiless satire? What a carnival indeed is the drunkard's life, as in whirling delirium, he is at once bewildered and dazzled by the intoxicating bowl; he staggers, and leaps and dances in his unearthly frenzy, and ends with a silent nod and drunken slumber.

Shakspeare makes Cassio speak these really scientific words: "Oh, God! that men should put an enemy in their mouths to steal away their brains! That we should, with joy, revel, pleasure and applause, transform ourselves into beasts! To be now a sensible man, by and by a fool, and presently a beast! Oh! strange! Every inordinate cup is unblessed, and the ingredient is a devil."

Let us ask ourselves if we have ever, directly or indirectly, placed that cup and devil to a young man's lips. Let young men learn, when enticed, to say no.

COURAGE.—Many boys are inclined to walk on stilts, and fancy they are larger than men, as a chicken on the hen's back might feel itself taller than its mother. Others boast of their courage. This propensity is often exhibited by very young boys, as when they stand as near a passing team as possible, without being run over, and look up at the driver as if to say, "I ain't afraid of you."

True courage is commendable; boasting or fool-hardiness is no evidence of true courage. As when boys or men boast whom they can whip, but never actually dare the achievement of a single victory, unless it be to intimidate or beat a much smaller boy or their mother! When actually fearless, they court quarrels and battles, and think it exceedingly manly; when even a bull-dog or the most woe-begone cur can do as much.

True courage, my boy, has higher aims than those. Are you ready to plunge into the river, at the risk of your own life, to save a drowning boy? Or to ascend to the fourth-story window, when the house is burning, expecting any moment to fall, to rescue a child from the greedy flames? *That* is courage. But even that is not the climax of human courage. There is something higher, as the moral character is higher than the physical organization. Dare you to defend what you sincerely believe is truth, justice, and right, when by so doing you incur the bitter antagonism of the people and the alienation of your friends? Emerson's hero is the man who, "taking both reputation and life in his hand, will with perfect urbanity dare the gibbet and the mob, by the resolute truth of his speech and rectitude of his behavior." If you have only brutal fearlessness, but are destitute of such courage as these, boast not of it; if you do possess these, you will be too modest to boast.

DUTIES TO PARENTS.—*Pat.* "Say, Mick, there goes your mother. She's bin afther picking up a bit of wood for the fire." *Mick.* "Faith, and why shouldn't she? The old lady's gitting on in years, and likes to have her little comforts about her." The old lady had been to the woods, where she had procured a number of large sticks, the weight of which was nearly break-

ing her back and crushing her to the ground, while Mick, a robust young man, was standing there idle and calling it comfort! An example of disregard, which well illustrates the true sentiment of a great many children in all classes of society, though not always in so rough a form; it carries its own moral.

The following playful lines portray a far too common deportment of sons and daughters towards their mother:

"The world seems all a dreary waste;
The drifts of snow are scattered where
In a few weeks will verdure break—
Mother, the cat is on my chair.

"And now with ease I'll try to write,
As I have done in days of yore,
With no intruding one to seek—
Mother, will you please shut the door?

"Ah, that is right, my mother dear.—
These papers, please, you will not handle
And I will truly thankful be—
I really wish you'd snuff the candle.

"Howl! howl! ye winds, I hear your roar,
But soon in slumber you will sink,
And then your voice we'll hear no more—
Will mother please give me a drink?"

"Out in Ludlow township, in the State of Iowa, there lives a farmer worth about $15,000. For some time his father and mother have been inmates of the county poor-house. Each of their ages is eighty-four years. Last week the old gentleman died; word being sent to the son, he visited the poor-house, and instead of giving his father a decent burial, he asked the county to bury him in a pauper's grave: it was done; the son meanwhile sat by the fire."

The following lines from Will Carleton portray this unamiable disposition, which we fear is not rare:

OVER THE HILL TO THE POOR-HOUSE.

I.

"Over the hill to the poor-house, I'm trudgin' my weary way—
I, a woman of seventy, and only a trifle gray—
I, who am smart an' chipper, for all the years I've told,
As many another woman that's only half as old.

II.

"Over the hill to the poor-house—I can't quite make it clear!
Over the hill to the poor-house—it seems so horrid queer!
Many a step I've taken, a toilin' to and fro,
But this is a sort of journey I never thought to go.

III.

"What is the use of heapin' on me a pauper's shame?
Am I lazy or crazy? am I blind or lame?
True, I am not so supple, nor yet so awful stout;
But charity ain't no favor, if one can live without.

IV.

"I am willin', and anxious, an' ready any day,
To work for a decent livin', an' pay my honest way;
For I can earn my victuals, an' more too, I'll be bound,
If anybody only is willin' to have me round.

V.

"Once I was young an' han'some—I was, upon my soul—
Once my cheeks was roses, my eyes as black as coal;
And I can't remember, in them days, of hearin' people say,
For any kind of a reason, that I was in their way.

VI.

"'Taint no use of boastin', or talkin' over free,
But many a house an' home was open then to me;
Many a han'some offer I had from likely men,
And nobody ever hinted that I was a burden then.

VII.

"And when to John I was married, sure he was good and smart,
But he and all the neighbors would own I done my part;
For life was all before me, an' I was young an' strong,
And I worked the best that I could in tryin' to get along.

VIII.

"And so we worked together: and life was hard, but gay,
With now and then a baby for to cheer us on our way;
Till we had half a dozen, an' all growed clean an' neat,
An' went to school like others, an' had enough to eat.

IX.

"So we worked for the childr'n, and raised 'em every one;
Worked for 'em summer and winter, just as we ought to've done;
Only perhaps we humored 'em, which some good folks condemn,
But every couple's childr'ns a heap the best to them.

X.

"Strange how much we think of our blessed little ones!
I'd have died for my daughters, I'd have died for my sons;
And God he made that rule of love; but when we're old and gray,
I've noticed it sometimes somehow fails to work the other way.

XI.

"Strange, another thing: when our boys an' girls was grown,
And when, exceptin' Charley, they'd left us there alone;
When John he nearer an' nearer come, an' dearer seemed to be,
The Lord of Hosts He come one day an' took him away from me.

XII.

"Still I was bound to struggle, an' never to cringe or fall—
Still I worked for Charlie, for Charlie was now my all;
And Charlie was pretty good to me, with scarce a word or frown,
Till at last he went a courtin', and brought a wife from town.

XIII.

"She was somewhat dressy, an' hadn't a pleasant smile—
She was quite conceity, and carried a heap o' style;
But if ever I tried to be friends, I did with her, I know;
But she was hard and proud, an' I couldn't make it go.

XIV.

"She had an edication, an' that was good for her;
But when she twitted me on mine, 'twas carr'in' things to fur;
An' I told her once, 'fore company (an' it almost made her sick),
That I never swallowed a grammar, or 'et a 'rithmetic.

XV.

"So 'twas only a few days before the thing was done—
They was a family of themselves, and I another one;
And a very little cottage one family will do,
But I never have seen a house that was big enough for two.

XVI.

"An' I never could speak to suit her, never could please her eye,
An' it made me independent, an' then I didn't try;
But I was terrible staggered, an' felt it like a blow,
When Charlie turned ag'in me, an' told me I could go.

XVII.

"I went to live with Susan, but Susan's house was small,
And she was always a-hintin' how snug it was for us all;
And what with her husband's sisters, and what with children three,
'Twas easy to discover that there wasn't room for me.

XVIII.

"An' then I went to Thomas, the oldest son I've got,
For Thomas's buildings'd cover the half of an acre lot;
But all the children was on me—I couldn't stand their sauce—
And Thomas said I needn't think I was comin' there to boss.

XIX.

"An' then I wrote to Rebecca, my girl who lives out West,
And to Isaac, not far from her—some twenty miles at best;
And one of 'em said 'twas too warm for any one so old,
And t'other had an opinion the climate was too cold.

XX.

"So they have shirked and slighted me, an' shifted me about—
So they have well-nigh soured me, an' wore my old heart out;
But still I've borne up pretty well, an' wasn't much put down,
Till Charlie went to the poor-master, an' put me on the town.

XXI.

"Over the hill to the poor-house—my childr'n dear, good-bye!
Many a night I've watched you when only God was nigh;
And God'll judge between us; but I will al'ays pray
That you shall never suffer the half I do to-day."

The quotations given represent several phases of disrespect of children to their parents true to the life. Every day's experience shows that such disrespect is an ignoble characteristic belonging to many. Some children are thoughtless. Go down deep enough into their hearts and sympathetic affection will be found buried there. But sons and daughters have no business to bury love which they honestly owe their parents. It ought to be kept in the light and in endearing and enduring action, and its fruits will be priceless to both giver and receiver.

How great a shame when parents become aged and destitute of financial use to their children, those children, even if they do not speak it in words, hold it in mental reservation that the "old folks have been good parents in their day, but they have outlived their usefulness and are now great burdens to us." If such children do not send their parents to the poor-house they feel that "my brother does not do his share toward their support." If they do not turn them out of doors they have a sort of inward longing that they were out. Disrespect of children to their parents crops out in many forms, and far too often for human credit. Not willing to give, if need be, a living to our parents while we have hands to work out a living for ourselves? For shame! Neither the want of room nor any other condition can shield us from the duties we owe to our father and mother —the duty to love them; the duty to manifest our love in every manner in our power to make them comfortable and happy. Do we either know or care how hard our parents have labored for us? In what eager, deathless anxiety they have watched over us when in infancy or illness we were too feeble to help ourselves? What sort of a price shall we pay for it?

There are, however, thousands of amiable daughters and noble sons who, as humane custodians, will protect their parents when old as their parents once protected them, who are ever ready with tenderest love and venerating adoration to watch over them in their sickness or feebleness, and fain would share pain's bitter cup.

Right Thinking.—The subject of right thinking receives too small a share of our attention; the worth of right thoughts still less. "As a man thinketh in his heart, so is he." Thus, if a boy's thoughts are bent almost entirely on "fun," then "fun" is about all he is good for. If a man constantly dwells on ways of making money, his time will be devoted to that object. If his brain is diligently exercised in making plans by which he may take advantage and get the better of those with whom he deals, he will live a dishonest life. The young man whose conversation often and naturally turns to subjects of sensual pleasures, as the needle of the compass points to the north, leads a dissolute life.

If given to thoughts of virtue, charity, and all true manliness, so will be his life. Therefore, if the character of one's life is as the character of one's thoughts, the habit of right thinking cannot be too thoroughly inculcated. And to inculcate right thinking the inestimable word *ought* must be written deeply upon the soul and become the great principle of the life. It is not enough that we technically obey the voice of conscience; we must be moral at heart. Like Martin Luther, when he went cheerfully down to Worms, beset on the way by enemies more bitter than fiends, and spoke those brave words: "So says my conscience, I can no other." His voice, like a healthful breeze, shall sound along the course of time and move the souls of men in future ages. It is such grand master spirits as his that make nature's noblemen and win the world to goodness.

At the commencement at Charlier Institute Dr. S. Irenæus Prime spoke to the young men as follows:

"I am invited to speak to you five minutes, and only five. Little can be said, much may be done, in five minutes. In five minutes you may fire a city, scuttle a ship, or ruin a soul. The error of a moment makes the sorrow of a life. Get that thought well into your hearts, and my work is done in a minute instead of five.

"Tempted to sin, remember that in five minutes you may destroy your good name, fill your soul with undying remorse, and bring, with sorrow, your father's gray hairs to the grave. But if you can do so much evil, so you may do a mighty sum of good in five minutes.

"You may decide to live for usefulness and honor. Everything hangs on that choice, and it may be made in five minutes as well as in five years.

"Take care of the pence and the pounds will take care of themselves; take care of the minutes and the hours are safe. I made a little book in this way; in the breakfast-room were pen and ink, and paper, and if when the hour for breakfast came all was not ready I wrote a few words or lines, as time allowed. The book was finished, and it had been published scarcely a week before I heard it had saved a soul; it has saved many since. It did not

cost me one minute that would have been used for anything else.

"Five minutes in the morning, and as many in the evening, will make you the master of a new language in two or three years. Before you are of middle age you may speak all the modern tongues, if you will but improve the spare minutes of the years now flying by.

"Minutes are more than jewels; they are 'the stuff that life is made of;' they are diamond stepping-stones to wisdom, usefulness and wealth; the ladder to heaven.

"It will not take five minutes to do a good deed, and one a day will make a life of honor and usefulness with glory beyond."

A goodly proportion of our country's young men, it is happily true, are excellent and promising; thanks to a quick reception of good advice, to good homes, good schools, well-balanced brains, and advanced civilization. For such it is not a hard matter to do a good deed, and by a succession of good deeds live "a life of honor and usefulness." But unfortunate organizations with no efficient early culture are poor apparatus for the manufacture of good words or good deeds. I believe that men badly organized by long custom may lose control over their own acts; yet that does not excuse misdeeds, for it was their business to subject themselves when young to that earnest discipline and moral culture which direct the life into "honor and usefulness." Even young men thus organized, if they would thus make their lives, must put their energy, patience, and all their will into well-directed action and persevere, for a reckless young man cannot spring at once into a complete manliness, as Minerva, in complete armor, jumped out of the head of Jove.

GOODNESS.—Sir Walter Scott, when on his death-bed, said to his son-in-law: "Lockhart, I may have but a minute to speak to you. My dear, be a good man—be virtuous, be religious—be a good man. Nothing else will give you any comfort when you come to lie here."

Character was the great study of Sir Walter Scott's life. He had observed it in all its forms; and saw all the forms lived out

in the life. Few perhaps have ever lived who were more capable correctly to judge of the real value of mental attributes. And yet some men—respectable men who have never given mind, human nature, or the needs of humanity an hour's candid, earnest study—feel such a fear of goodness that they are entirely free to aver that they would rather be called a knave than good. What a value is that for kindness, and virtue, and truth, and honesty! how shallow the statement! When a man purchases a book, a piece of dry-goods, a barrel of flour, or a farm, or hires a servant, he has no objections at all to the best book, the best dry-goods, or barrel of flour, or farm, or servant. When he comes to the man with whom he deals, he wants the *worst* man, does he? Or is it not after all the fact that the more confidence he has in the person of whom he buys the goods, concerning his truthfulness, integrity and goodness, the better that person suits him? Why, then, should not the character and the life of a man or woman be the *best* character and the best life? The fact is, a respectable man does not honor one whose life and morals are degraded. He *does* honor one who is charitable, honest, true and good; who has done a thousand duties well, made the most and best of life, and used faithfully all the faculties that God has given him. And yet he, himself, is ashamed to be good!

"How long we live, not
Years, but actions, tell."

Holding in memory that if a young man's actions are automatic —or if he always *must* do exactly as he is inclined, even to murder, and is therefore, as he thinks, not morally responsible, he himself and perhaps his parents are to blame for it—in other words, he *is* responsible for his own acts; for an early and proper culture and discipline of the intellectual and moral faculties will make a man a self-governing being. It follows that every boy on arriving at the age of understanding, should fix for himself an ideal conduct of life, and then educate and discipline himself up to that ideal so far as it is in his power. "Oh, he will be all right when he gets his wild oats sown," is a common excla-

mation and as fallacious as common. While it may be true of certain persons for whom nature has done more than they are willing to do for themselves, it is entirely untrue with others, and in any case it is a dangerous rule to follow.

Let every youth ask himself this question: "What sort of a man do I really want to be?" If you want to be an intemperate man, commence while young to smoke; choose dissipated companions, and play billiards where alcoholic liquors are to be had. If you want to be a lazy, unthrifty man, be lazy when young. If dishonest, deceive in your boyish trades; and so all round. But if you have decided to be a noble man, have pure desires and noble aims. Choose associates better than yourselves. Learn that all substantial knowledge depends upon study, and *close* study. That "there is no excellence without labor;" that you can attain to "no depths without digging;" that the basis of intellectual knowledge is the desire to know, the basis of moral culture is the desire to do right, and the basis of social life is the manly desire to please and be pleased in the *higher* life.

WORK—STUDY—BOOKS.

Something has already been written in the preceding pages about these subjects; but I wish here to present a few hints which I trust will be of some advantage to young people.

WORK.—Men say, and say truly, much about over-wrought and shattered nervous systems, and how our asylums are filled with people made mad by over-work and over-study. But we are apt to forget that probably more persons suffer from protracted idleness and dissipation, than from either physical, or intellectual over-exercise. A great many consult physicians about their physical ailments when simply rusty or dyspeptic for want of occupation. Press them into regular employment, and away scampers disease. We forget what a muscular force producing machine the human body is, and what a thought producing machine is the human brain. Nor can those forces be arrested without organic stagnation, any more than could the crystal stream whose current is stopped. This magnificent human engine cannot be kept polished and in good running order without

regular, systematic mental and muscular activity. Idleness is truly "the mother of mischief."

Not only the health of the body and mind demands early and systematic exercise, but the business success of after life as well. This the following experiment practically demonstrates:

Some months ago, Rev. Washington Gladden, of Springfield, Mass., believing that if he could find out how the active and prominent men of his own city spent their boyhood, it would help to solve the problem of what is the best training for boys, prepared the following circular, which was sent to the one hundred men who could fairly be said to stand at the head of the financial, commercial, professional and educational interests of the city:

"*My Dear Sir:*—I desire to find out, for the benefit of the boys, how the leading men of this city spent their boyhood. Will you be kind enough to tell me—

"1. Whether your home during the first fifteen years of your life was on a farm, in a village, or in a city, and,

"2. Whether you were accustomed, during any part of that period, to engage in any kind of work when you were not in school?

"I should be glad, of course, to have you go into particulars as fully as you are disposed to do; but I do not wish to tax your patience, and I shall be greatly obliged for a simple answer to these two questions."

No less than eighty-eight of the busy gentlemen who received this circular were kind enough to answer the questions—some of them briefly, most of them quite fully, and it turned out that few had been brought up like most of the boys who crowd the ball-grounds and fill the streets of our cities in these later days. Here is a brief summary of the returns:

Of these eighty-eight men, twelve spent the first fifteen years of their life in the city, twelve in villages, and sixty-four were farmers' boys.

But of the twenty-four who lived in villages and cities, six were practically farmers' boys, for they lived in small villages, or on the outskirts of cities, and had the same kind of

work to do that farmers' boys have. One of these village boys said:

"I learned to hoe, dig and mow; in fact, I was obliged to work, whether I liked it or not. In winter I went to school, and worked nights and mornings for my board."

Another said: "I used to work away from home on a farm in the summer and fall. In the winter, when going to school, we three boys used to work up the wood for winter use."

Four others told substantially the same story. As these were about the same as farmers' boys, we may add them to the list, so that seventy out of eighty-eight—almost four-fifths of all these men—had the training of farm-life.

Now, how was it with the eighteen city and village boys on the list? Did they have an easy time of it? Five of them did, as they testify; five of them had no work in particular to do, but one of the five says that he studied law when out of school, and that was not exactly play. The rest of the eighteen were poor boys—not paupers, by any means, but children of the humbler classes, many of them in narrow and needy circumstances—and though they lived in cities or villages, they were accustomed from their earliest years to hard work.

"Was generally employed," says one, "during the summer months, and in vacations, in doing any kind of work that offered."

Four of the city boys were newsboys. One of them says: "The last year I was connected with the press, I earned one hundred dollars before breakfast."

Another: "I have paid my own way since eight years of age, without any assistance except my board from my eighth to my eleventh year."

Of all these eighty-eight boys, five only had nothing in particular to do.

While these boys were growing and working, a great many others—sons of merchants and lawyers—were growing up in Springfield, going to school and amusing themselves as boys of their class are apt to do. Where are they? Only five of this class are heard from among the eighty-eight solid men of that

city. Some of them perhaps are prosperous men in other cities, but the number cannot be large, for in Springfield only five men out of eighty-eight came from this class. Ninety-four and a half per cent. were either farmers' boys or poor and hard-working town-boys.

Mr. Gladden made his report to the public of Springfield, in the form of a lecture. The mere announcement of the subject alone crowded the church, which is a large one, and the interest in the lecture was so great that the Mayor and several of the representative citizens requested a repetition in the Music Hall. When this came off, the hall was packed and hundreds went away from the doors unable to gain an entrance.

I would therefore advise school-boys to spend vacations in useful employment mostly, in intellectual culture partly, and a small part of the time in play. And to those who have left school the same advice will apply—employment in business pursuits; when you have leisure, a little indulgence in amusements, and give much time to cultivating your minds by reading useful books, observing things, studying human nature, and especially your own nature. An old writer gave good advice when he said: "Read not books alone, but men, and amongst them chiefly thyself; if thou findest anything questionable there use the commentary of a severe friend rather than the gloss of a sweete lipt flatterer; there is more profit in a distasteful truth than in deceitful sweetness."

"Read not books alone," and yet read books. Be close students, but not victims of an indiscriminate literature. Devour not *everything* you find in print, but choose with the greatest circumspection. An eminent author and doctor of divinity has recently published an article in a prominent religious periodical advising the cultivation of a taste or interest in reading, asserting that it matters little *what* a young person reads, but "*read*." Now, that advice is good or bad, innocent or mischievous, *which?* It is important to know *which*. The sage Victor Hugo teaches: "Every man who writes a book, that book is himself. Whether he knows it or not, whether he wishes it or not, it is so. From every work, whatever it may

be, mean or illustrious, there is shaped a figure—that of the writer." If we compare the character of books with the character of their authors we shall, I think, find that Victor Hugo is mostly right. In Shakspeare's works, for instance, every shade of human character is represented, not entirely that of the author, but *through* all runs a great artery which personates true manliness and majesty—*that* is Shakspeare. If, then, the author is *in* as well as behind his book, we practically associate personally with the author when we read the book. If he is an intellectual giant, we associate with a great man; if a dwarf, we associate with a little man. So with goodness, meanness, and other qualities. The answer, then, to the question: Does it matter *what* young people read? is answered by this other question: Does it matter who are the playmates and associates of young people? And the last question has been already answered.

While the young should cultivate an interest in books and a taste for reading, they ought at the same time to cultivate the taste for *good* books. This can be done, whatever be the organization and temperament, by a constant habit of right thinking, right acting, self-denial, and self-direction.

Among the many wise things Mr. H. W. Beecher has said there is none wiser than his words about books in the house. "We form judgments of men," says he, "from little things about their houses, of which the owner, perhaps, never thinks. In earlier years when travelling in the West, where taverns were scarce, and in some places unknown, and every settler's house was a house of entertainment, it was a matter of some importance and some experience to select wisely where you should put up. And we always looked for flowers. If there were no trees for shade, no patch of flowers in the yard, we were suspicious of the place. But no matter how rude the cabin or rough the surroundings, if we saw that the window held a little trough for flowers, and that some vines twined about strings let down from the eaves, we were confident that there was some taste and carefulness in the log-cabin. In a new country, where people have to tug for a living, no one will take the trouble to rear flowers

unless the love of them is pretty strong; and this taste, blossoming out of plain and uncultivated people, is itself a clump of harebells growing out of the seams of the rock. We were seldom misled. A patch of flowers came to signify kind people, clean beds, and good bread. But in other states of society other signs are more significant. Flowers about a rich man's house may signify only that he has a good gardener, or that he has refined neighbors, and does what he sees them do. But men are not accustomed to buy *books*, unless they want them. If on visiting the dwelling of a man in slender means we find that he contents himself with cheap carpets and very plain furniture in order that he may purchase books, he rises at once in our esteem. Books are not made for furniture, but there is nothing else that so beautifully furnishes a house. The plainest row of books that cloth or paper ever covered is more significant of refinement than the most elaborately carved étagère or sideboard. Give us a house furnished with books rather than furniture. Both, if you can, but books at any rate! To spend several days in a friend's house, and hunger for something to read, while you are treading on costly carpets and sitting on luxurious chairs, and sleeping upon down, is as if one were bribing your body for the sake of cheating your mind. Is it not pitiable to see a man growing rich, augmenting the comforts of home, and lavishing money on ostentatious upholstery, upon the table, upon everything but what the soul needs? We know of many and many a rich man's house where it would not be safe to ask for the commonest English classics. A few garish annuals on the table, a few pictorial monstrosities, together with the stock religious books of his 'persuasion,' and that is all! No poets, no essayists, no historians, no travels or biographies, no select fiction, no curious legendary lore. But the wall-paper cost three dollars a roll, and the carpet cost four dollars a yard! Books are the windows through which the soul looks out. A home without books is like a room without windows. No man has a right to bring up his children without surrounding them with books, if he has the means to buy them. It is a wrong to his family. He cheats them! Children learn to read by being

in the presence of books. The love of knowledge comes with reading and grows upon it. And the love of knowledge in a young mind is almost a warrant against the inferior excitement of passions and vices. Let us pity these poor rich men who live barrenly in great bookless houses! Let us congratulate the poor that, in our day, books are so cheap that a man may every year add a hundred volumes to his library for the price which his tobacco and his beer would cost him. Among the earliest ambitions to be excited in clerks, workmen, journeymen, and, indeed, among all that are struggling up in life from nothing to something, is that of owning and constantly adding to a library of good books. A little library growing larger every year is an honorable part of a young man's history. It is a man's duty to have books. A library is not a luxury, but one of the necessaries of life."

CHOICE OF BOOKS.—If, then, it is true, as Bishop Potter says, "that people will not be better than the books they read," as evil companions corrupt the good morals of youth, bad literature debases the mind, creates those morbid mental conditions which lay the basis of unhappy, discontented life, instability of character, and lost virtue, the choice of books, therefore, becomes a matter of no inferior importance.

You have been or are being educated in the common schools and have not forgotten anatomy, physiology, hygiene, the mathematics, philosophy, chemistry, astronomy, geology, zoology, and history. But no person should consider his or her education finished when leaving school. In the case of nearly every one at least a small portion of almost every day may be devoted to intellectual culture. "But," some say, "my business will be such that I do not need an extensive education." No person's business is such that a good education is not required. Is knowledge worth nothing for its own sake? Is a preparation to come into contact with the intelligent nothing? Is it nothing to prepare the mind for the higher enjoyments of life and for the still higher life to come?

After the school-days are ended, books are the chief source of mental culture. The great question is, what books shall be

chosen for youths and for adults. Without rejecting all novels, we certainly condemn what in common parlance is called the yellow-covered literature—those morbid, flashy, trashy books which create and feed a morbid imagination. We also forbid those papers and books the business of which is to portray crime, a familiarity with which has a tendency to allure the reader to commit crime. None of these are conducive to the healthy growth and culture of the mind, and should be banished from every home and every eye. There seems to be an almost universal acquiescence in the goodness, purity, and safety of Sunday-school library books, because they *are* Sunday-school library books, but some of them are trashy and despicable. Those only should be read which make the reader wiser or better. Sufficient intellectual scope may be had without the reading of bad books, and may be found in the continuation of those studies of which a thorough knowledge has not already been acquired; and also in the reading of biography, explorations, poetry, novels, and other works which will educate the mind, or cultivate a taste for the useful or beautiful.

When you read a book, make its contents your own. Superficial and profuse reading is destructive to the memory, and in any sense does not pay. Here, as in everything, "That which is worth doing at all, is worth doing well."

If possible, let every book or newspaper article you read come from an author of good personal repute, and see that it is made of that kind of food that will give you intellectual, moral, or esthetic culture.

Such books as the following may be read with advantage, to be chosen, of course, according to the age and general intelligence of the reader. If you love themes of human interest, quaintly and philosophically written, read the works of Bacon. If you have an interest in the deep philosophy of the soul, expressed in clean-cut sentences, and sharp as a bayonet, study Emerson. If you want at once to be delighted and instructed, by periods elaborated to the highest degree of elegance, read Addison. Harriet Beecher Stowe will pleasantly interest and make you better. Charles Kingsley will give you that which


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will educate the higher sentiments of man. By all means read and re-read the writings of Washington Irving—a writer who has never been excelled in easy-flowing English, in the happiness of ideals, and in unspotted whiteness of thought. He will gently waft you over pleasant fields, as in happy dreams. If you are fond of travel, Bayard Taylor will enchant you along the scenes of the Orient. Hayes or Kane will give you a far more easy passage than they had over the ice-bergs and floes of the North. Livingstone and Stanley will show you Africa in all her wildness and savagery. Layard has delved for you among Nineveh's ruins. If you would study life, and trace it down as near to its origin as science has yet reached, study Lionel Beal's "Biology." If the mind is the proper study of man, then search Dr. W. B. Carpenter's "Mental Philosophy." If you wish to ascend those mental heights from whose tops an unbiased mind may behold God written everywhere, read Tyndall's charming "Lectures on Heat, Light, and Sound." If you would sail backward along the varied stream of history, Macaulay, Bancroft, and Gibbon will be your helmsmen, and instruct, in a most interesting manner, in your journey. When you need the stimulus of fiction, you need not trouble the sensational works, filled with indelicacies which create a morbid imagination, fit you for anything but for what you ought to be fitted, and fill you so full of what is worse than chaff and nonsense, that no room will remain for the useful and the beautiful. Rather feast the natural soul on the pure romances of Scott, and on the charming studies of life as portrayed by Charles Dickens.

If you like to commune with nature and truth made ethereal, or with imagination and dreams, go where Bryant, Whittier, Longfellow, Tennyson, and Milton will lead you. Add Shakspeare to those, and you have that which is still more true to human nature, and from which flows an undercurrent of equally good morals and sound conscience; an overcurrent in which history flows under the wings of the finest imagination; and, over all, that which seems magnificently divine.

Then fill out your course with such authors as the following: Parton, Taine's "History of English Literature," Harriet Mar-

tineau, Disraeli, Ruskin, Carlyle, Bunyan, Chalmers, Paley, "Ferrier on the Function of the Brain," Dryden, Pope, O. W. Holmes, Bret Harte, Joaquin Miller, James Russell Lowell, Victor Hugo, Nathaniel Hawthorne, Mary Clemmer Ames, Louisa M. Alcott, George Eliot, etc.

Many other authors might be mentioned with great praise, for since an interest in literature has become so greatly developed, books have flowed upon the people from thousands of streamlets. Many of these are worthy of commendation, many more worthy of all condemnation, and still others deserve neither. Good authors have explored and studied fields sufficiently numerous and varied to satisfy every well-cultivated taste, and no one has any excuse to eat mental filth Let me remind you that it is not advisable to read too many books, nor in too hasty a manner. The person who daily reads a little carefully, if books are well chosen, will be much better informed, finally, than one who quickly skims over an immense number of volumes.

War is a relic of barbarism, and more brutal and cruel between enlightened nations in proportion to the perfection of their civilization. Refine war's code of ethics as you may, it is all the same murder under the gaudy guise of glory; youth should so understand it, for we need no perpetuation of a race of grim warriors.

Every person is expected to read history. One is not likely to seem well informed, nor properly fitted for social converse without a knowledge of at least the outlines of history. But there should be a decided change in historical architecture. The world has not suffered from the want of able historians, and while nothing should be detracted from their merited reputation, would it not be as well if they would write as if war is not the natural and most sublime state of nations and of men? As if warriors, however brave, are not essentially the noblest workmanship of God? Histories should be written in a manner calculated to inspire patriotism, but they should not be written to inspire readers with a love of war, nor to tickle the nation's petty jealousies, over-weening pride, or lasting distrust.

The following most eloquent passage from Sydney Smith

applies as well to our day as it did to his: "On every side of me I see causes at work to spread a most delusive covering over war and to remove its shocking barbarities to the background. I see it in the history which tells me of the superb appearance of the troops and the brilliancy of their successive charges. I see it in the poetry which lends the magic of its numbers to the narrative of blood, and transports its many admirers as by its images and its figures and its nodding plumes of chivalry it throws its treacherous embellishments over a scene of legalized slaughter." And how is the admiration of war's "treacherous embellishments" to find its merited oblivion while historians do feed the youthful mind on "the superb appearance of the troops" and the "brilliancy of their successive charges," and make them believe it is greatness and glittering glory? While poets whom we delight to honor "lend the magic of their numbers to the narrative of blood," and while school-children and school youth are encouraged to select such pieces, morbid in the light of all humanity, for declamation in the schools? The "Charge of the Light Brigade" is very thrilling, but does it teach young men to hate or to be charmed with war? Or the following:

"He snuffed like his charger the wind of the powder,
His sword waved us on, and we answered the sign.
Loud our cheer as we rushed, but his laugh rang louder,
There's *the devil's own fun, boys*, along the whole line!
How strode his brown steed! How we saw his blade brighten
In the one hand still left—and his sword in his teeth!
He laughed like a boy when the holidays brighten,
But a soldier's glance shot from his visor beneath;
Up came the reserves to the medley infernal,
Asking where to go in—through the clearing or pine?
Oh! anywhere! Forward! 'tis all the same, colonel,
You'll find lovely fighting along the whole line."

Poetry and history have so aroused the animalism in human nature, nations have become so unreasonably sensitive, so jealous of their honor, that a very small act on the part of one government is often construed by another as an insult to her flag, and she thinks her unsullied honor demands immediate and

ample restitution. Even an insult, or a supposed insult of a few men of one nation to one man of another, is quite enough to evoke a sudden cry for vengeance. For the life of one man, for a few acres of desolate sandy beach of disputed ownership, for a few codfish, there come fierce cries of "To arms! to victory!" and the whole land is shaken by a thousand cannon and thousands of men go down to death in sanguinary conflict. *That* is *glory!* Not only glory in itself, but a glorious victory to the conquerors, who have killed six thousand human beings and have lost only five thousand and five hundred of their own men! The two nations both exclaim that those patriotic soldiers have died for their country, for their firesides and homes, and give those noble soldiers a great many glittering laudations, which do them much good after they are dead! It would be well enough for the people to remember that those who make the wars do not generally fight in the thick of the battles, and too often care little for the common soldiers. Living, they can use them; dying, they can, for the purpose of stimulating the living to deeds of valor, praise them. The soldiers' reward is too often in the gratification of the capricious ambition of their kings. "What is ambition? 'Tis a glorious cheat." Let ambitious men "think not ambition wise because 'tis brave."

As long and as often as nations make war, men must, of course, fight the battles; but I wish to be understood thus: that nations, and especially wise, Christian nations, ought to learn to stand by Quaker guns and settle misunderstandings as the Quakers settle theirs, without appeal to physical coercive force. But nations believe that, while the settling of disputes by arbitration is wise, it is often unavailable and impossible. This may be true, but true simply because through distrust, jealousy, and downright envy, they will not quit their belief in the impossibilities of arbitration. It has, with all those impediments, been expedient, available, and possible at least once within our own recollection, in a very grave controversy between our own United States and England. Arbitration has been successful many times, and can be many times more on the same principles, and eventually *every* time.

America and England are humane, highly civilized Christian nations. England is our mother, America her son. Make war on each other—take each other's lives with murderous weapons!

Let these two grand governments lead in the peaceful, sublime work of arbitration, and others will—*must* follow—all must eventually follow. *That* is *true* glory and the best humanity to man.

In the name of mercy let us cleanse our imagination of the morbid idea that there is any charm in the surging lines of marshalled thousands; in the clashing and the grappling of steel against steel; in the fiendish screech of shells; in the swift, volleyed hiss of bullets; in the terrible refrain of the artillery's rifting thunder; the hurrahs and yells of the contestants, and the groans of the dying. If proud and charmed in the presence of these, shall we still be charmed when the graves of the dead, the ghastly, seething, bubbling decomposition of brave men slain in the crazy, bewildering contest, the wrecks that strew the sea-washed beach, are sickening and humiliating reminders of horrible tragedies of war?

Not so is peace. In the view of the broadest and noblest manhood, the word peace has charms and sweetness all its own and difficult to match. The thousand ships as they come from the sea send to the splashing waves on shore no tales of woe. The invisible lightning flashes no swift reports of war's murderous carnage or of battles lost or won. No messengers go forth holding bloody telegrams in their hands which blanch the cheeks, carry convulsive emotions and the darkest sadness to a thousand fatherless or brotherless homes. Quiet herds graze upon the grassy hills; busy men traffic in the marts of trade, and their hearts pulsate not to war's savage music; the crisp, delicious air, smelling not of the curse of Cain, vivifies the innocent blood; we gather in happy homes, unbroken circles. All feel the healthful stimulus of these scenes, and sweet contentment richly fills the chambers of the soul. These are the glories of welcome peace.

We admire heroism. Why may not historians as well see it in the touching incidents of peace, as in the mad excitement of

battle, and do as much honor to the hero? If one is braver than another when the battle is raging, his name is sometimes echoed down the ages. But think you the brave soldier who, in the most intense excitement of battle, thrusts his sword through men, is more heroic than the following boy? Clarence Carmon and Cora Geer, of Lansingburg, N. Y., while skating, accidentally skated into an air-hole. Clarence grasped his young mate, held her head above the water, and called for help until he was exhausted; then with these brave words: "Hold on to the ice, Cora; I'm going—good-bye," he went down, giving his young life to save his friend. Not so glittering perhaps as some heroic deeds of war, but far more precious to our best humanity.

As houses which compose blocks are in contact with and support each other, so men and women live, move and have their being in social bonds, upholding one another. One man in a thousand, perhaps, stands alone like the oak in defiance of lashing winds and beating storms, while nine hundred and ninety-nine depend more or less upon each other for their opinions and deportment. Such dependence, in a certain degree, is right, but not in the degree which will deprive one of manhood, womanhood, individuality.

Young persons should acquire independence of opinion just as fast as they acquire exact knowledge. Dare, my young friend, to have a character of thine own, and let the character be an honor to thy name. Dare to have opinions of thine own, but see that those opinions are founded on truth. A shallow, erroneous, or false word, opinion or act is not wise simply because the word is spoken, the opinion held, or the act performed by thy superior. Neither is an opinion to be trusted, nor an act *just*, merely because the opinion is held or the act performed by a million.

A man sometimes must have great courage, if he maintains independent opinions. Sometimes muddy roads are suddenly frozen, and become very hard and very rough, but on which smooth ruts are soon formed by the wheels of heavy wagons. When riding over such roads you smoothly roll along while the wheels of your vehicle keep the ruts, but the moment they

leave them, you get a good shaking up. So while a man keeps in the well-worn ruts of public opinion, he is generally carried along by gentle influence, but let him get out of those ruts, as when he forms and maintains an opinion of his own, unlike that of the world, and he is shaken by the sarcasm and storms of the outside elements. Some men from contemptuous audacity court the opposition of those around them, differ from others merely for the sake of differing, and from a mulish obstinacy, or from dishonest motives, when actually they are very ignorant men, and unacquainted with that they so pertinaciously maintain. While *this* is shallow and mean, true manliness maintains opinions deduced from studious, logical, and conscientious reasoning. Of such are they who move the world.

But for Copernicus, who reasoned himself out of the immense rut of public opinion, and removed the cycles and epicycles of former astronomers from the omnipotent enginery of the universe, and located the suns in the centre of planetary systems, our own great sun and the ponderous stars might, to this day, have been playing our little earth their courtesies in their diurnal revolutions around it! For daring to maintain so absurd an opinion that the earth moved on its own axis and around the sun, Copernicus was persecuted and jostled by the bitter storms of public opinion. So was Galileo more than a hundred years afterwards, for daring to advocate the Copernican system of the universe. After having been compelled to abjure that system, he is said to have stamped his foot on the ground and muttered, "But the world does move." So truth, "crushed to earth, will rise again," assert its claims, and sublimely conquer.

Aim high. Yet "soar not to fall, but stoop to rise." Endeavor fully to prepare thyself for all the duties which shall devolve upon thee, for life's innocent pleasures, and higher joys. Remember to strengthen thy body, thy brain, thy conscience, thy self-reliance. Speak and do what is wise, manly, pure and true.

"Assert thyself; rise up to thy full height;
Shake from thy soul these dreams effeminate,
These passions born of indolence and ease.
Resolve, and thou art free. But breathe the air
Of mountains, and their unapproachable summits
Will lift thee to the level of themselves."

YOUNG LADIES.

What we desire to say to young ladies will chiefly be found under the subject, "How to choose a husband." A few hints may be in place here, since they will be somewhat applicable to older ladies, and to young men.

In many ways the conduct of girls is naturally correct. As their bodies and features are of finer texture than that of boys, so are their minds. Their ways are lady-like—the ways of boys are boyish and nothing else. We behold a girl's perfections with admiration—her imperfections, only to correct them.

TASTE.—Nature or heredity provides some young ladies with such excellent taste that culture cannot greatly improve it. Others must depend almost entirely upon culture. Many of the latter study true taste insufficiently. In dress, for instance, they may indeed expend far too much time and money, but to very little advantage. It does not necessarily follow that a lady is most becomingly dressed, because her garments are of the finest texture, and very expensive; and are looped and fringed and flounced and plaited and tasseled and ruffled and bowed. There must be *harmony* in every part, which shall meet and blend in perfect unison with the complexion and form. Exactly what is necessary to produce a fine and taseful effect, it is not always easy to determine. It may not consist in any single portion, but in a certain indescribable combination as an entirety. Nor will the same combination do for all, as is too often imagined; for an attire in which one may appear beautiful, charming, graceful, on another will not seem to be the same apparel.

The various garments which make up the full dress should not only harmonize with the form and complexion of the lady, but each garment should, in color, texture, newness, etc., harmonize with every other portion.

Do not undertake to cultivate good taste in dress by dressing as do certain others. Rather cultivate judgment by experience, experiments, and comparisons with yourself. Use your looking-glass to some purpose. Choose a friend of excellent taste who will honestly assist and criticise you in a practical manner. So of the manner of dressing your hair, etc.

PROPRIETY.—It is not wise to imitate improper words or actions, even though the words are spoken or the actions performed by the most elegant. The question should not be, Does *she* do thus and so? but, Is it *proper?* Certain savages feel well and even genteelly clothed with but a cloth around the waist and a collar around the throat; ladies sometimes think themselves charmingly attired in garments six inches too short at the neck, and many inches too long at the feet. Propriety does not ask you to follow either example.

While a lady should possess sufficient independence of character to not conform with every ridiculous fashion, her independence need not be so decided as to cause her to ignore, and over-sail either the *costumes* or *customs* of good society. For instance a pretty robe of white well becomes a young lady; but no one is the more lady-like if she wears a mixture of red, white and blue, in contempt of those who wear the white only. No lady thinks the window-sill or dining-room table a proper place for her feet; she does not think it polite to pick her teeth with a fork; or to thrust huge masses of food into her mouth with a knife; or blow her nose at the table. It is no mark of politeness or of wisdom for one to do any of these in opposition to the rules of society. As far as good manners and good sense will permit, every person should conform to the customs of the society in which she may be. For example, the people of some countries are accustomed not to wear shoes while in the house, leaving them at the door before they enter. *There* an American lady might, with perfect propriety, do the same. But if one is where slang phrases or an irrepressible gossip are the rule, it is lady-like not to conform to those usages of that society. Of course, if a woman does clothe herself in an awkward manner, or speak or act in entire nonconformity with the rules of good

manners, it might not be easy to convict her of moral guilt; but her ways cannot be pleasant to her friends, nor really to herself when she is conscious of her oddity, and her oddity is smilingly, pityingly, or scornfully observed by everybody.

Some young ladies and a few older ones are very careful of their taste and loveliness when abroad; but at home are generally ill clad and dowdyish. This should not be. I do not mean that a lady, young or old, should necessarily dress richly at home. I do mean that she ought to have enough respect for those who are her best friends, and for herself, to persuade her to sustain at home a beautiful personal presence in every sense of the expression.

Temper.—The measure of one's future happiness will depend greatly upon one's disposition. Unhappiness does not often depend on actual occurrences, but on what we fear will come, or coloring darkly the things of the present. Life is mostly made up of small pleasant or unpleasant occasions. We should prepare ourselves to make the most of the pleasant and the least of the unpleasant. Those dark incidents which we are unable to change into smiles let us prepare to meet them gracefully. A lady cannot find satisfaction in fretting, crossness, and scolding, but she may enjoy much if she is ever throwing beams of sunshine over the shadows and the storms. My young friend, if you are born with a good disposition, be grateful; if with an irritable temper, learn to be its master, not its slave.

Work.—Do not think it ungenteel to work. Learn the art and science of housekeeping and domestic esthetics. How little do those lovely girls, with whom life seems a perpetual waltz to delicious music, realize that life is indeed real, having labor for their hands, and their brains, and their hearts. They have the deepest conviction that it is lady-like and genteel to loll in their carriages and appear helpless, physically and mentally. So assiduously do they cultivate this sentiment, that it grows into an uncontrollable passion, and branches out into an overweening love for the undeserved sympathy of others. They are quite oblivious of the fact that there is or can be an object or person in the world for whom they ought to show sympathy. This

helpless condition sometimes grows into real or assumed sickliness of body, and even greater sickliness of mind, to end in that peculiar condition of the nervous system which they call by the polite name of nervous prostration, but the "vulgar people" name "hysterics." Love and sympathy are most praiseworthy in man and woman. But these best boons should be properly bestowed and reciprocated. Helplessness is not commendable in one who is not *really* physically disqualified to help herself. A lady may with perfect propriety love and be loved, sympathize and be sympathized with, and cling, if she will, to those she loves; yet she ought to discipline her character to self-reliance, and to feel that she can stand alone.

God has made no more attractive piece of workmanship than a beautiful woman. Let her be adorned with beauty, learning, and gracefulness. These are not more attractive than a deep interest in the happiness of others and forgetfulness of self. When any sweet-hearted girl goes into society without a thought as to how much admiration she can win—let thought of herself be swallowed up in the happiness she is determined to confer on others—and she will unconsciously make herself happy, and win the endearments of every one.

BUSINESS.

It is said that a Roman youth, of noble family, once entered an apartment in which were placed statues of eminent men and of the gods. In this august presence he took off his boyhood's raiment, put on the manly toga, and made the vow that he would imitate the great in their virtues and their deeds.

Be not precocious, or a man before your time. It is well for you, from early youth, to realize that true life is made up not altogether of "fun;" take thought of what the business of your life shall be, and let the course of preparation be thereto directed. I would have you previously so well prepared for the conduct of your business life, that when you lay aside the garments of youth and put on the manly toga, you will be ready to imitate the virtues of the great, to stand with Spartan strength on your

own feet, to consecrate your life not only to business, but to your fellow-men and to God.

The young man who stands in the presence of his incipient business-life should pause until he decides on what principles he will conduct it. While it is wise—not only wise, but an imperative duty—to accumulate sufficient for the support of one's family, and that before the helplessness of old age, one ought to be mindful that the happiness of himself and family does not depend upon great riches, and that there is no need for great wealth. He who commences with the motto, "I will get rich, honestly, if I can, but I will get rich," has not at all comprehended the true scope of life; the limited idea he has of it is grievously erroneous and unmanly. If, then, he would be manly, let his determination be steadfastly fixed to shun the fallacies of the times.

Aside from the fields in which black-hearted villany rules, I will here point out a few examples of the fallacies and duplicities of the times, practiced in their business relations by many who either sustain, or have sustained, reputable names for integrity. Prompted by an irrepressible avarice, they are not content to labor in a straightforward manner and to wait; there must be found for them not only a royal, but a telegraphic road to fortune. For instance, when a new gold-mine is discovered, either in prolific imaginations or in fact, thousands run wild. Nothing dishonest about it in those who have honest intentions, but it represents an unreasonable haste to get rich. They do not wait to take into account that on the average it costs more than a dollar to dig a dollar's worth of gold, or, if they do consider it, they will tell you that they are not going to the mines to dig, but to work at blacksmithing or the carpenter's trade, to sell goods, practice medicine or law, or to speculate. They seem to have not a thought that there are three times as many already engaged in all the branches of business as are needed. If they are going there to get rich by their sharpness, thousands are already there so much sharper than themselves, that the great probability is all they can get will be taken in by those voracious maws. They go, notwithstanding, many of them leaving

lucrative trades or professions. They go in palace cars and walk back. But gold is useful, and let those work the mines who cannot do better.

There are other kinds of haste to attain riches and honor which temptation puts into activity, and which usually sooner or later end in poverty and shame. We have forcible illustrations in the defalcations of bank officials, heads of corporations, trustees of estates, etc., who, in their desire to quickly acquire riches, appropriate the money deposited in their care and permit themselves to hazard their trusts. They mean to replace them, but the market takes an awkward turn, or an accident in the enterprise occurs, more cash is needed to protect the first venture, deeper and deeper they are drawn, until finally concealment is no longer possible and publicity, with its record of ruin and blasted fortune, wrecks the career of the once trusted honorable man.

The hundreds of such occurrences should be sufficient to teach young men not to enter positions of trust unless they know that they not only can, but that they *will*, resist temptation.

The same rule will apply to men in regard to entering positions in which funds belonging to another, or to the county or State, pass into their hands. Men should learn another thing—the distinction between such funds and their own. If they fritter away their own money they have some sort of right to do so, and yet their families ought to have something to say about it; but if they thus spend the funds of others and fail to return them an equivalent it is a crime. If they mean in the first place to refund, as many probably do, they should by the experience of others, learn that the risk is far too great of finding themselves at the day of reckoning defaulters and ruined men. Young men should be satisfied to be honest, industrious, sensible, and thankfully receive the proceeds of such a safer course; those proceeds will be a competency and a clear conscience—far more desirable than dishonest, uncertain millions, or prison walls. It is strange some intelligent business men cannot predict their own downfall, when all the time they are spending several times

the amount of their income and contracting debts which they have no means of paying.

A species of the hazardous financiering seems quite the fashion with some bankers of to-day. Not content with the results of legitimate banking, they run into wild-cat speculations, and failure, panic, disaster follow upon the heels of folly—all at the expense of their depositors.

The business manner of many in every vocation is that of too much puffing, blowing, and egotism, which really amount to fashionable dishonesty. This tendency permeates everywhere, in all departments of business, among all classes, and more or less contaminates the morals of the people. The young catch and assimilate the spirit of their fathers, and take advantage of it in their jack-knife trades. The fathers who daily practice essential falsehoods in the name of business soon come to think it just and legitimate. "Besides," say they, "others do so, therefore so must I to compete with them." Conducting business thus, perhaps at first moderately, their minds constantly become better and better prepared to step and step along with bolder and bolder fronts to deeper and deeper craftiness of trade. Let a pure man come down from one of the stars, where, I hope, the morals of men are uncorrupted, and listen to the wonders of this newspaper before me.

1. "The most complete Singing Book for Sunday-schools and the Home Circle ever published."

2. "Nothing like it since the Song King. Everything choice. No machine-made music. No threadbare poetry."

"Astonishing," says our ingenuous *visitor*. "I shall take home with me ten thousand copies of each of these, and we will outrival the music of the angels and the harmony of the spheres."

3. "Fifty-two of the finest Visiting Cards in the world for twenty-five cents." Our *visitor:* "The finest in all this beautiful world, and so cheap! O, how delighted my wife will be when she sees them. Our world is so prosaic that the beautiful things of which you read seem as gems of very heaven."

4. "Grand Square and Upright Pianos; unpurchased pre-eminence, which establishes them as unequalled."

5. "Grand Square and Upright Pianos. The Standard Piano of the World. First Grand Gold Medals of Honor at the World's Fair," etc.

6. "Pronounced by the best judges superior to all others."

7. "Our Grand Square and Upright Pianos are matchless. Received the only Gold Medal at the World's Fair."

Our listener begins to recover his lost reason, and with a blushing look he says at this point: "Our pianos at home we think very good, but each is not better than any other—it cannot be here—the proprietors prove too much, and hence they prove nothing. What does it mean?" Well, after reading the advertisements of dry-goods, and clothing, patent medicine, etc., etc., our star-man, let down from his bewilderment to contempt, says: "Life on this fair planet is a comedy, mystifying and a myth." And he disappears with a hushed and sullen stillness.

My boy is fond of funny books and I read him an advertisement about one as follows: "The Funniest Book in the World. Sent to any address on receipt of a three-cent stamp to pay return postage." For the purpose of showing to my son the futility of undertaking to get something for nothing I sent for it, and it proved to be a little pamphlet of fifteen pages, three and a half inches by five inches, telling of the wonders of a patent medicine, with some jokes scattered between. Indeed, this "Funniest Book in the World" might itself be called a joke. Why did not the advertiser state just what the pamphlet was? Why did he flaunt so inviting a name for such a prosaic thing, if not to deceive the people?

Most of the above advertisements represent really sound business men, and in the general acceptation of the term, honest men. But deceitfully to play upon the credulity of the people is neither honesty nor truth. The great probability is that there is nothing on the whole gained by it, for it is questionable whether advertisements windy as the imagination of the poet who

> "Took the tall trees by the hair,
> And as with besoms swept the air,"

convince, or disgust most readers.

Lawyers.—Essentially modest as every man belonging to the legal profession is supposed to be, occasionally a lawyer is found whose stock of exaggeration, dishonesty, duplicity, imperious impudence is not so very small after all. A client consults his lawyer in reference to a grievance which he thinks ought to be redressed. In these circumstances, a man, because of his selfishness and passion, is generally prejudiced against his opponent and is so much in favor of himself that he cannot see the case with an eye of absolute justice. The lawyer therefore should be an impartial umpire in the case. In order to be that, in the first place he must insist that his client states exactly all the facts of the case, and then advise him to settle with his opponent, or through arbitration by the strictest rules of justice, instead of pressing him into a law-suit, and its uncertain ordeal. What would be rightly thought of a physician, if he were to give an out-patient medicine, the effect of which made him ill for a month, when by one prescription he could have cured him? Why should not a lawyer perform an honest duty as well, and demand a reasonable fee for it, instead of leading one in his plausible manner, or by all sophistry and trickery, into an expensive and uncertain law-suit? Why will he cut the throat of his best friend for ten or twenty dollars? When shall gold lose its all-persuasive power, and be placed under the regal sway of principle?

When engaged in a suit at law, how can it defraud justice of her dues, if attorneys were to state cases as they really are, and facts as facts; question witnesses without insulting them, and as if men were speaking to men?

It is said that Dr. Johnson was once passing a church-yard, and seeing some people weeping over a grave, asked a woman why they wept. "Oh," said she, "we have lost our precious lawyer, Justice Randall! He kept us from going to law—the best man who ever lived." The doctor wrote her the following epitaph to place upon his tomb:

"God works wonders now and then,—
Here lies a lawyer, an honest man."

It is a notorious fact, that lawyers frequently deal in law dishonestly. *Some*, I believe, conduct business with manly integrity, but law will not mean equity until the balance of power is on the side of honesty. Not until the great majority of lawyers shall utter truth, fairly stated, to their clients and to the courts. The first condition of an argument at the bar ought to be, as everywhere else, that a man be convinced of the truth of that on which he argues and undertakes to prove. Sophistry, however splendid, is virtual perjury, perverting the course of justice, and inflicting a vast amount of mischief.

THE JUDGE.—A judge should be of inflexible sound principle, so free from partisan prejudices as to have a desire to arrive at the exact truth, unmixed with the least wish of other conclusion. A judge who is determined to procure a particular verdict has various means by which to influence the proceedings of the trial, and verdict of the jury. Thus he may refuse to consider the objections, the preferences and the arguments of the counsel who is adverse to his partisan spirit, while he favorably receives them from the other counsel. Again, he may treat the adverse witnesses as if they were false, and their testimony devoid of weight, and the witnesses on the side with himself with implicit consideration. He may place obstacles in the way to thwart the efficacy of the cross-examination. In his summing up, he may so forcibly present a one-sided face of the law and the testimony that the jury, however just they mean to be, renders the unjust verdict, for which the judge is really responsible, though he may undertake to hide his responsibility under the cloaks of the "gentlemen of the jury." A judicial mind is a pre-requisite in a judge; honesty, justice, purity are imperative necessities.

PHYSICIANS.—All physicians should possess learning, skill, deep tenderness, quick sympathies and trustworthiness of character. Men and women, especially the latter, confide to their physician not only their private ailments, but their family secrets, and "the skeleton in their homes." To betray such confidence, or in any manner take advantage of it, is *base*. Not only should there be no betrayal, but a keen tact is

required in the immediate management of those home differences, lest the grievances between husband and wife be increased rather than diminished. Whatever be the private matter, the highest sense of honor is invariably demanded of the physician.

When we consider the peculiar duties devolving on medical men; the confidences committed to them; the powers they possess, and the strong temptations to abuse their professional franchise, it is evident their characters ought to be fortified by high moral principles. Unfortunately it is true the characters of some are so often the reverse of this that they take advantage of their patients and each other, and to supersede another they impeach the judgment of their patrons. Thus one physician is dismissed from a case, and another is called. The last examines the patient, shakes his head, and with great wisdom relieves himself by saying, "If *I* had been called when Dr. Flint was, I could have saved the patient." Soothing words to the patient and to the friends! Magnificent kindness to the first physician! He does not know whether he could have saved the patient or not. The first physician very likely is as skilful as himself. His words are spoken for patronage, and to glorify self at the expense of another, and to the vexation and grief of the sick and their friends.

Again, a doctor looks at a case of bad surgery and without knowing or caring whether the attending surgeon, the patient or somebody else was to blame, this wise Æsculapius is ready to drop his smooth, derogatory insinuations; the significance of which is about this: "If *I* had been the attending surgeon, and had done such a job, I should expect to pay for it." Therefore, the patient, even if he knows he is himself responsible for the bad results of the surgery, naturally and quickly draws the inference that he can make a jury believe he has been maltreated; the inference is all the more natural and quick because there are, or seem to be, visions of money at the end of a suit for malpractice. The suit is commenced with bright anticipations, continued with much expense and anxiety to both parties; and terminated with great profit to—the lawyers.

I was educated in the regular school of medicine, and practise according to the teachings of that school; and therefore may not, but trust I shall, be pardoned by my regular medical friends for the following expression of my honest and earnest convictions concerning consultations. I write upon the subject here, because it is one in which every one is interested, and this book is intended for the people.

In the first place it is a general fact, that the people often judge very poorly of the ability and actual skill of physicians. If they would watch the practical, absolute and comparative success of medical men, a correct judgment would be possible, but the average person does not wait for that. In the consequence of their ill-founded judgment, many often change doctors, and frequently add to that mistake the employing of one who makes the most showy and noisiest pretensions, forgetting that shallow streams make the most noise. Of course, like other men, physicians, if they remain permanently in one town, will find their true level. A great proportion of them do not stay in any one place long enough to find any level. What ever may have been the reasoning by which one comes to his decision, he usually employs when sick the physician who, in his opinion, will most quickly and most surely restore him to health. Suppose that from some cause during illness the patient or the friends become discouraged? They have not, it may be, lost confidence in the medical attendant, but fear that the patient will die; and want the doctor of their next choice to see the sick one in consultation. All except certain physicians would at once say the patient should have that doctor. If the latter without good reason should refuse to see the patient in consultation, the people would very naturally mark the refusal as heartless inhumanity. Yet if the attending physician happens to be a homœopathist or an eclectic, or in any way what is called irregular, then a practitioner belonging to what is known as the regular or allopathic school of medicine, must not grant the solicited consultation, for permission is refused by the regular American code of medical ethics. If he has the courage to grant the consultation notwithstanding the dreaded code, he is

expelled from the medical society to which he belongs and ignored—rejected by the members of his school. If he refuses, and the patient dies in consequence of it, then the people say, "Cain, where is thy brother Abel?" The physician who refuses thus to consult, may not be base or unsympathetic, and the people should not call him so. It requires no little courage to do what he believes is right, if the ostracizing condemnation of the whole medical fraternity to which he belongs is the cost of his temerity. Besides the people gain nothing by it, for he who does thus counsel can never afterwards persuade one of the regular school to consult with him, unless he first makes a public confession before the medical society, and promises he will sin no more!

I suppose this strict prohibitory article was incorporated into the code of medical ethics for the very substantial reason that we are putting ourselves on a level with homœopaths when we counsel with them! and that we are thereby recognizing quackery. The majesty of self-estimation! The great majority of the members of the regular school of medicine seem implicitly to believe in the divine inspiration of the code of ethics, and so they hold the article in question forever sacred!

The best learning, intellect, and skill are, I doubt not, in the regular school of medicine; and this school is every way noble but in the miserable bigotry relating to consultations. I have always been ashamed of it, and the time *will* come when all shall blush to remember it was ever in "the code," in every other way grand and manly.

Placing ourselves on a level with members of other medical schools forsooth! Are we called in consultation for the purpose of proving our peerage with the attending physician, or to exhibit professional afflatus, or overgrown egotism? *Should not the good of the patient rather be the object?* There is a higher law than pathies or schisms, and it is found in the cry of those who suffer—"Doctor, save me." The consciences of physicians and the persuasive opinion of the people ought to enforce this law. The mission of the physician is a mission of mercy, as well as of cash. When a household is in the dreadful presence of sick-

ness, the issues of which touch upon the awful mysteries of death, shall we refuse to respond to their anxious call of "help, or I sink?"

At the meeting of the British Medical Congress, Dr. Bristowe, F. R. S., gave an address on Homœopathy, in which he demonstrated, to the satisfaction of himself and his hearers, that Hahnemann and his followers have pursued a false method of medicine. They were, however, honest and diligent students of therapeutics, and, with a consciousness that he would oppose the sentiments of his hearers, he proceeded to argue that the prevalent rule forbidding consultation with them is undignified and unwise:

"He did not ask them to accept his opinion; but he asked them to consider it. It was this: that when homœopathists were honest of purpose and well educated, and regularly qualified practitioners of medicine, they should be dealt with accordingly. He was not going to discuss the vexed question of consultation; but he thought he could adduce strong reasons, if necessary, in favor of the morality of that course, and quite believed that good might at times result from it to the patient. It might be said that it would not be conducive to the dignity of the profession; but he thought it was more conducive to the maintenance of true dignity to treat with respect those who honestly differed from them in opinion, than to hold themselves apart and to wrap themselves up in pharisaical pride. What had they to fear from homœopathy? Bigots were made martyrs by persecution; but when persecution ceased the would-be martyrs sank into insignificance. The rise and spread of homœopathy were, he believed, largely due to the opposition of the orthodox schools, and were the enforced isolation to cease, the fictitious importance now given to homœopathy would cease also. At all events, breadth of view and tolerance of opinion were the fitting characteristics of medical science."

EDITORS.—The genius of the press is at once the pillar which supports and the lever which moves the world. The power of editors is great and discretionary. That power should, it is self-evident, be used conscientiously and with the nicest judgment,

Not to transcend their franchise, it is well if periodicals are exponents of proper social and national thought. Is it safe to ask *some* editors if their newspapers are entirely immaculate?

Republican institutions and laws give special facilities for the activities of men who are corrupt and corrupting. Snaky politicians, corruptors, and corruptions of all kinds are marks against which the press should hurl its silent yet piercing arrows. There *are* men occupying stations even in our great official galaxy who are not low political tricksters. One would hardly believe it, though, if in any political campaign he takes the word of the papers. If an honest man wants his motives impugned and his character maligned, let him be a candidate for office. Even editors of the highest rank and of the highest honor are apt to permit advertisers to exaggerate to such extremes, that often when comparisons are made between the statements and actual facts, we might be reminded of the negro washerwoman who was always boasting to her competitor of her own "big wash." Her rival withheld her reply until the clothes were hung out, and then retorted: "A mighty little hang-out for such a big wash."

Editorship implies a thorough understanding of the relations of men in society and in the State; an awakening of the best ideas and an establishment of the best results, for man individually and in society, having regard for the various interests, and their relative and intrinsic value. Would it not be well, therefore, if papers were to avoid unreasonable, bitter personality, unnecessary vituperation, sly inuendo, unproved scandal, sectarian flings, quack advertisements, self-glorification, and the hunting of questionable game generally; carefully to exclude all indelicate language, profuse publication of crime, and all things which tend to corrupt?

In a newspaper, useful information, entertaining reading, reliable news are principal things. Good correspondence and discussion of living topics are interesting and useful. Stories should be admitted with critical discretion, and upon their inherent excellencies. In order to make a paper trustworthy, able, and consistent, its editors must be men of sound judgment, apt for

the business, and of unsullied principle. Men who will give to their paper personality, freedom of thought and utterance, guided by good taste, good sense, and a clear conscience. While it is earnest, readable, and seasoned with Attic salt, it should be thoughtful and instructive in questions concerning men and things, cultivating our candor, our breadth of view, our honesty, and largeness of heart.

POLITICIANS.—There are some brave, noble men in the arena of politics. Our country and people feel shame for the duplicities, trickeries, and general rascalities of such as are not so. At times we lose all confidence in our fellow-man, and are inclined to believe that friendship is assumed and mythical—put on for selfish ends, that honesty is only in the name, that heroism and love are other names for egotism. Respecting official positions, and electing men to fill them, it would be well for the people to remember "there is a great difference between a cunning man and a wise man. There are those who can pack the cards, but cannot play fairly; they are good in canvasses and factions, yet otherwise mean." There is a saying of Plutarch, that men of weak abilities, set in high places, are like statues set on great bases, made to appear less by their position.

Diogenes when seen in the market-place at mid-day with a candle in his hand was asked what he sought. He answered that he sought a man. The world needs *men*. Men who can and who will so thoroughly impress true manliness upon our youth; men who can and will make exaggeration, falsehood, egotism, meanness, and general wickedness so obnoxious that the next generation shall greet each other as better, if not wiser; who shall be what they seem and seem what is right.

The corruptions of the times permeate all vocations. For instance, an "honest farmer" is a noble man; but, unfortunately, *all* farmers are not honest. My intention is not to stigmatize all of any vocation as dishonest, nor in any way dangerous to the well-being of society. My aim is, however, to point out for the good of young men, a few of the errors to which many of the present generation are slaves, and a few of the stains which tarnish the fair reputation of business men. I do not estimate

my persuasive powers as to presume that all men will immediately take the road to righteousness. I have simply told truths, which, like other truths, will be a force whose widening influences may contribute to secure purity in society and perfection in men.

MERCANTILE LIFE.—"No man can tell whether he is rich or poor by turning to his ledger. It is the heart that makes a man rich. He is rich or poor according to what he is, not according to what he has."—Beecher.

Do you quail in the presence of a millionaire? Remember that the power of many rich men lies in their gold—not in themselves. If that be the only ambition of such men, are their aspirations so lofty as to arouse our envy or intimidate our courage?

A spirited man cannot be convinced that he should have no enthusiasm to gain a competency, and he shoūld not be so convinced. Men should know, however, that money ought not to be gained at the loss of true manliness. Therefore, the following mistakes should be corrected: Many have the opinion that the vocations are so infused with corruption it is entirely impossible for a man to transact business on principles of strict integrity. Consequently in the choice of a business a young man is not apt to ask himself, is it right? but rather, is it popular? or, is it available? or, is it profitable? Commencing business, he is likely to view the grounds something in this way: *success depends on sharpness.* If, therefore, he possesses sufficient sharpness to strike asunder the keen blades of others, he can ride his black charger to the mountain-tops of wealth. Sharpness, smartness—two genteel words for dishonesty—*that* is what the world calls merit. These two words will yet break down our nation, if the most respectable continue to swear by them, instead of strangulating them to make them barren of activity and results.

What though the ways of trade are fraudulent? Young men should the more firmly set the world a better example. Do you say: "I cannot honestly transact business amid the scramble and the selfishness of this cheating age?" That is, if one man

cheapens a barrel of sugar by an adulteration with sand, you must repeat the cheapening by a similar process. Not very logical. The age is corrupt enough, certainly, but not so corrupt as to forbid honest dealing on the part of honest men. People mostly prefer to patronize honest dealers, even if their tongues do sing the praises of those who are sharp. Let young men of integrity go forth into the vocations of life and conquer the venality of the age, throw trade from the hinges of deception and distrust, and establish it on the exact law of reciprocity and equity. Knowledge, virtue, integrity, are forces adequate to lift trade, commerce, the professions, *man* to a higher plane. It may sometimes seem a man's interest to misrepresent, to color too highly, to conceal faults, but in the long run it is not. It is the opinion of great and most honorable business men that no man's success is likely to endure for many years, unless he conducts his affairs on strict principles of integrity—the giving of a dollar's worth for a dollar. Bacon said: "Round dealing is the honor of a man's nature."

Every man wants to win success, and this is well. But there are many who want to win riches in a sudden bound, though the leap be through the murkiest filth, attended with the consciousness of having done something disreputable. They never dream that to achieve wealth by the longer process of manful, physical, or intellectual labor and waiting is a crown of bright jewels which forever sheds around a lustre of satisfaction. A brave, simple, honest, industrious, intelligent life—that is true victory. We would not obscure the fact that there are many strong influences standing athwart our road to allure us to dishonest success and strive to dwarf our best intentions. But in this, as in other things, our character must be *fixed:* if not already fixed, we must take the first step at whatever cost, and never look back, for character *grows*. The decision and the first decided step may *cost*, even if the young man is not bad at heart. This is more so since the spendthrift habit has in America arisen to such a height that its effects are most baleful on thousands of business men. Those thousands have an undoubting conviction that there *must* flow large and swift streams of gold into

their capacious coffers if they would sail in society's upper air, for they believe that "man is valued for what he *has*, not for what he *is*." Large fortunes gained by base methods—is *that* success? Rather is it not another name for the most miserable failure?

Success is a good thing, but it is not of so much worth as to be purchased by evil means. An old merchant when about to die divided the small accumulations of long years among his sons: "It is little enough, my boys," he said, "but there is not a dirty shilling in the whole of it." Let young men come down to this truth that pure hearts and clean hands are better than ill-gotten gains. And to this motto:

> "So close is glory to our dust,
> So near is God to man—
> When duty whispers low, 'Thou must,'
> The youth replies, 'I *can*.'"

THE CHOICE OF BUSINESS.—Your school-days ended, it is wise to decide what part you are to act in the drama of a useful life; because there is no use for sluggards and triflers. The business you choose should be one of which the most conscientious will not be ashamed. The more completely it approximates independence of the fortunes, misfortunes or caprices of others, the better. Whatever you do, allow me to advise you what not to do; do not depend on *official pap*. The struggle, the "wire-pulling," and often the degrading trickeries which one must pass through to obtain any office from governor to constable, are to the last degree humiliating to one's humanity. And after all, just as likely as not, Mr. B. will be elected instead of you. In that case what are you to do? You have learned no trade, no business, no profession, and so what indeed can you do but keep up appearances by wearing good clothes, living generally on the money you actually owe your tailor, your butcher, and—wait? A very poor way to live. A very good way to drive a man into dishonesty, lawlessness, and general indifference in his obligations to others.

Before choosing a vocation, it is wise to consider analytically

what you are most capable of doing, and doing well; and what you would best like diligently to pursue: for your mental and physical make-up may be such as to make you proficient in one business, and quite the reverse in others; a man is seldom successful in a business he dislikes.

Having decided on the employment, prepare yourself *thoroughly for it.* Whatever the business, never consent to be a botch; proficient only in the art of doing a thing badly.

How to Conduct Business.—Having chosen your vocation, throw enthusiasm and energy into it: but not *all* your energy to the neglect of all other manly thoughts and manly duties. A young man should learn at the beginning that his humanity is under certain obligations to others and to society. Mankind belong in the nature of things to one brotherhood. Nevertheless, in the individual struggle for existence, each man's success greatly depends on his own exertion; so his exertion must essentially impersonate some amount of selfishness. But selfishness ought not and need not be the principal ingredient of the man.

Each member of the human family needs at some periods of life, and is more or less dependent on, the sympathy and the aid of others. Therefore no man has a moral right to withhold his own sympathy and aid from those who need and deserve them.

Determine from the start to transact business calmly, attentively, honestly, avoiding the fallacies of the times. Let integrity, reliability, good manners be indelibly written on your heart, as well as over the door of your place of business. Throw will and energy into your affairs. Endue your soul with the robust force of honest, indomitable enthusiasm; it will help you on to success, and snatch victory from defeat. Feel not above your business, but gain such knowledge of it as to be its master. Some visionary men ever believe they see much money in some business which they are not at the time following, and they change vocations every new moon. If there is money in a business it is generally reserved for him who clings to that alone, and throws himself into the work. Be careful

then what business you choose, and when a choice is made, let it be fixed; be determined to succeed, but not at the expense of your nobility. See both sides of every business transaction; not exactly in the same way that the laundress did who had taken six shirts to the wash and returned but five. She wept as she confessed that she had ruined one shirt. Her customer was kind and relieved her weeping by saying: "Never mind, it is all right, what do I owe you?" She answers: "Six shirts at twelve and a half cents each, seventy-five cents." On being reminded that she had burned up one of the shirts, she said: "Well, suppose I did! Hadn't I washed it before I burnt it? Go along wid ye—trying to chate a poor dissolute widow."—In your business habits be so prompt in meeting engagements, that it will not be said of you, "the hour's come but not the man." The language of some men's actions is, "everybody's time belongs to me." Everybody's time does not belong to us; nor any one's time. This should be remembered of others as well as in matters of business concerning ourselves. Certain men of leisure have a habit of calling, without legitimate purpose, on men at their places of business, and prolonging their stay. Most business men have something to do, and therefore during business hours do not often prefer to be long interrupted by unnecessary calls, even from friends. If we have business with business men, let us attend to it and take our departure *as* business men. If we are wanted for the purpose of relating "long yarns," timidity will not usually prevent men from inviting us to call for that purpose. Until we are invited, let us take it for granted that we are not particularly wanted except on matters of legitimate business.

Have order in everything. As disorder would disjoint the universe, so disorder will thwart your success as a business man. A man should be pleasant in his dealings. It is altogether unnecessary to wear a countenance of perpetual anger. Attend strictly to your own business, and permit others to do the same. Maintain an indomitable perseverance in adversity as well as in prosperity. Surely it is pleasant to be wafted by gentle breezes over the tranquil ocean; but can a man call himself an expert

and successful sailor who has not had fierce encounters with the waves in their anger, and won success from the storms? Vain boasting is not wisdom. "No," said a man, contemptuously, "it's easy enough for a man to make money nowadays. Times are different from what they were. Then there was solid work about it. Now all you have to do is to take your surplus and buy things when they are low, and sell when they're high; and there it is in a nut-shell. A child could do it. By the way," he asked, "could you lend me half a dollar for a few days?" We are sometimes tempted to buy what we do not need, and it is not wise. Note the following dialogue between a mother and her child: *Mamma.* "Well, Paul, what has your uncle given you for your birthday?" *Paul.* "A fine new ten-cent piece." *Mamma.* "What are you going to do with it?" *Paul.* "I am going to buy a portemonnaie to put it in." This so exactly describes many older Pauls that comments are unnecessary. Without penuriousness, we need be careful how we spend our money. There is no real success without economy. Yet it is scarcely advisable to be so saving as not to give at least a small proportion of our funds to worthy purposes. It is hardly manly to practice so much economy as to painfully squeeze a silver dollar when paying it out for a needful purpose, or when paying an honest debt; nor to insist on our family's living on food that swine will not eat, and sell that which the family should eat; nor to carry our shoes suspended from our necks by a string, to keep them from being worn out. We need to practice a sensible economy. Let us not be always making foolish exchanges. There is a vast difference between such a man and wisdom. "A man made his wife glad by telling her he had sold, for fifty dollars, his dog, that was a nuisance. She straightway began to congratulate both him and herself on this welcome accession to their little stock of money, when he dampened her satisfaction by telling her it was not exactly a cash trade, but he got two pups at twenty-five dollars apiece." That is the manner in which many manage their finances.

I advise every young person to acquire the habit of cheerfulness. The dungeons of discontented, fretting, melancholy busi-

ness men are worse than the airy nothings of the shallow. Cheerfulness, with good judgment, means power; gloom, weakness. Cheerfulness is a feature of happiness in and around a person; but grumbling, gloomy men—

> "What torments of pain they endure
> From evils that never arrive!"

Have self-reliance, will, perseverance. Franklin said: "Mankind are very superficial and dastardly: they begin upon a thing, but, meeting with a difficulty, they fly from it discouraged; they have capacities, if they would employ them." Mirabeau: "Why should we feel ourselves to be men, unless it be to succeed in everything, everywhere? You must say of nothing, *that is beneath me*, nor feel that anything can be out of your power. Nothing is impossible to the man who can will. *Is that necessary? That shall be:* this is the only law of success."

Nothing is impossible to the man who can will, is, of course, a little too emphatic; but the whole quotation is on the right plane, inasmuch as no arduous enterprise can be accomplished by a fickle-minded man. A *strong, persistent will* is an essential force by which to conquer success. Not quite "the only law of success," for nice perception, good sense, sound reason, sound health, *brains* must be in harmonious accompaniment. Nevertheless, no man may expect to battle successfully with the stubborn affairs of the world, without an indomitable will.

Judge not too confidently from first appearances. A young man—now a judge of good repute—was, one bright, full-moon evening, wending his way homeward from a visit, perhaps from his lady-love. As he was walking up a steep hill, and had nearly reached the summit—lo! behold a strange man, with the suddenness and the stillness of lightning, met him face to face. So unexpectedly did the apparition spring up, the young man was naturally startled, and had not time to comprehend the philosophy of the apparition. His only thought was to escape from his unwelcome visitor, whoever he was or whatever his mission; he dropped on his hands and knees and made the attempt to crawl around him. During the process they several

times encountered each other in corresponding positions. At last the ludicrous fact flashed into the young man's mind that the mysterious stranger was his own shadow! Nothing more! Before we engage in any important venture or speculation, let us, by a calm, critical course of reasoning, prove to ourselves a reasonable probability that the scheme is not as shadowy as the young man's spectral foe; things are often not what they seem.

A MORBID IMAGINATION.—A kite sailing among the clouds will flutter to the earth if the tail be blown off; so the imagination, in her highest flights, will fall, if not guided by reason, when applied to business.

"I would soar to the stars
That twinkle on high;
And call out each voice
Of the deep blue sky.
I'd go and visit
The lightning's bowers;
And then I'd away
To the land of showers.

"I would dive far beneath
The bright foaming waves,
And seek to slumber
Down in coral caves.
I'd ride on the wind,
I'd sail o'er the seas,
And in sultry days
I would fan me a breeze.

"I would ask a swift eagle
To lend me his wings—
The birds of heaven
To teach me to sing;
And the songs I learnt,
I would tune in glee
To the God who made
Me so happy and free.

"Over hills I would roam,
And through forests fair:
I'd go and visit
Proud king Lion's lair:

I would take a trip
Over fancy's wild
And be by nature
Nature's most fairy child."

The imagination here is pretty in verse, but far too profuse and wild for matters of business. Let not mere fancy over-leap actuality, or rule your actions. Accept of nothing but facts, however stubborn they may be. Some men are always living on great expectations, and their families find it exceedingly poor living. Remember that Thales looked upon the stars, and fell into the water. To reduce the aphorism to practice the application will stand about as follows: A young man with limited funds has for instance chosen farming for his vocation. If he is a practical man he will, before purchasing a farm, estimate the amount he will owe for it after paying in the money he already has, and the probability or improbability of his ever being able to pay that balance. If he proposes to pay the debt by growing wheat, he should count the maximum cost per bushel to grow it, the minimum number of bushels per acre he will harvest, and the minimum price he will sell it for. Estimate the interest on the debt, the expenses of keeping the buildings, etc., in repair, the cost of supporting the family, adding to all sufficient for unforeseen expenses. Then let him ask himself, "When will my farm be paid for?" Prior to venturing, one should think logically from every point of view, and be careful that unfounded imagination, a desire to own the farm, or his strong, young hope do not bias his reasonings or conclusions.

Using one's Credit.—"He is good for any amount you can get against him," are very pleasant and satisfactory words for a man to hear of himself. Nevertheless this excellent quality in one is capable of abuse, and the abuse often means ruin. The case of Mr. Easily Persuaded very well illustrates this, and should be a warning to a very large class of men. Mr. Easily Persuaded's early business life was rather unusually bright; for he was educated, honest, industrious, and heir to a few thousands, besides he had saved another few thousands before he married. Soon after the latter happy event occurred, the merchants patronizingly

smiled on him, and more than intimated their willingness to give him as long credit as he wished, for all the goods he wanted. His friends advised him to build a fine house "while he was about it," which he could do by over-drawing a thousand dollars at his bank. He knew that he could meet that amount promptly, and hence would build a fine house, and wait until he should be better able before furnishing it. But when the house was completed, it seemed a rather cold comfort to move into it unfurnished, and since his bankers were willing he should keep the thousand dollars longer than agreed upon, as "they did not want it," he concluded to let the bank indebtedness run along, and to furnish the house, which he did. Then a music-dealer wanted to sell him a piano; "so elegant a house as his should have a piano in it," said the dealer. He thought he better not at present buy one, but the salesman persuaded him with the inviting offer that he could pay a hundred dollars down, half of the balance in one year, and the other half in two years, and at the catalogue price, at that. That was too tempting an offer, and therefore a $1,000 instrument was placed in his parlor. Thus matters went on, until very soon Mr. Easily Persuaded found himself in debt $6,000, fully half what he was worth. All that indebtedness for dead property which could not be prevailed on to *earn* any portion of the amount. The debts soon came due (for time hurries in its flight when one does not want it to) one after another, and soon he was unable to meet them. Then his creditors began to *push* a little for their pay, but the push did not bring the cash. After forbearance ceased to be a virtue, the mortgages were foreclosed, and one evening he came home bankrupt.

Mr. Easily Persuaded's credit was once too good; now it is good for nothing; more than that he has become discouraged, indifferent, dishonest. No, his credit was not too good, but he was persuaded to over-use it. Young men should not tread the ice on which Mr. Easily Persuaded slipped and had his down-fall.

Be careful. The mighty hand of inexorable debt often crushes the energies, the honesty, the manhood out of a man.

Let the rule be, not to get into debt for anything, unless for that which may be evolved into increased gain. If you do get into debt, pay it, I pray you, when due. That easy impudence which prevents a man from paying what he honestly owes is not commendable. Nor is the following proclamation of the Dutchman, honest as it is, and true to nature:

"All dem vellers vot owes me
Must pay immediat;
But all dem vellers vot I owes
I do not ask dem dot."

THE DO RIGHT AND DO WRONG YOUNG MEN.—Reference here is not made to noble young men who, actuated by the truest conscience and by the grand force of the word *ought*, are deeply concerned lest they themselves do not right. It is to that class, and, I fear, a numerous class, who, ignoring the justness or unjustness of their *own* acts, have much to do in the way of directing the actions of others. Miss or Mr. So and So is "cursed mean" to do thus and so. Such a young man, if he is a rich man's son, will gratuitously receive $10,000 from his father and go into business. His follies bankrupt him in two years, and then he thinks it hard if his sire refuses to give him another $10,000, and says "it is deuced hard to work two years for nothing." "It is not right for father to treat me so." Young man, before you have a right to expect capital from your father, it is for you to show by your behavior that you deserve it and will make good use of it.

It is far too common for a rich man's son to hold his head aloft, and, feeling the magnitude of his father's wealth, undertake to conduct business as if the wealth were his own, when perhaps he really has not a hundred dollars. Doing business on the basis of your father's capital will not do. If you try to begin where he left off you will probably end where he began. If you would have any assurance of winning, you must first learn business and be thus content to begin and work as your father began and labored.

SELF-HELP VS. FATHER'S HELP.—When young men arrive at

the age in which they are ready to begin an active business life it is wiser not to feel the smarts of "injured innocence" if their fathers decline to give them capital with which to start. Older and experienced men have noticed that young men who are at first thus helped do not, as a rule, succeed in business as well as others who commence life with nothing save their hands and their brains. The latter depend on their best-directed manual and mental activity for earning money; they also at the same time learn how hard it has come, and hence know its value and how to keep it. The former have not generally learned these facts, and are not likely to learn them until they shall have lost what was at first given them, which often does not take long. Therefore the better way, for both fathers and sons, is for the latter to depend mostly on the resources which nature gave them until they learn the philosophy of earning and saving; then they can safely receive aid from their fathers.

VYING WITH THE RICH IN MAGNIFICENCE.—The poor often dress better, ride in finer carriages, and make more display than the rich. It does not always proceed from vanity. Many dressy people, for instance, have the best intentions, since they fully believe they must assume style in order to enable them to hold their normal positions in society. They feel, perhaps, somewhat like the negro cook who came to her mistress for money to buy a new dress. "You don't need a new dress," said the mistress; "you have more dresses now than I have, and a great deal more showy than mine." "Yes, missus, but white folks knows dey's quality, and everybody else knows dey's quality. But if we don't show what we's got, and who we are, nobody'd know the difference 'tween a color'd pusson an' a common nigger." Be it far from me to ridicule any man or woman for having a taste for dress or a disposition to adorn the temples which nature has so beautifully made for the soul; but the rich are not necessarily a whit better than you, and it is nonsense for you, if you are poor, to almost insanely attempt to array yourselves with garments as expensive and fine in texture as are theirs, or in any manner undertake to ape their splendor. If they have thousands of dollars a year which they can afford to

spend for clothing, and other thousands for other showy luxuries, we will not for a moment dispute their right to spend their money lavishly; but those who have an income of a few hundred dollars yearly certainly cannot elevate themselves to a higher plane, either in society, reputation, or morals, by wearing fineries for which they have no means to pay, or riding in carriages, and thereby defrauding their creditors. Unhappily there are those who do not care to pay their debts; but fine apparel and magnificence they *will* have, though their creditors must be deprived of their just dues, though their own children must suffer for want of suitable food. "There goes a well-dressed gentleman," says one. "Yes," replies another, pointing his finger scornfully; "he *is* well dressed, but he owes his tailor for his clothes; he owes other men honest debts which are proof against collection." Such is about the estimation in the eyes of respectable people a man occupies who wears finery or makes a display above his means, and at the substantial expense of those he owes. Lord Bacon used to commend the advice of an old man who sold brooms. A dressy, proud, lazy man came to him for a broom on trust, and the old man's advice was this: "Friend, hast thou no money? Borrow of thy back, and borrow of thy belly; they will never ask thee again. I shall be dunning thee every day."

Any young man of limited means may be assured that persons of sense and principle will not esteem him more for dressing in broadcloth, even if the broadcloth has been honestly earned. But the man or woman who displays any kind of magnificence at the forfeiture of honor or of principle is despised. A man's real, social, intellectual and moral standing may be known, not so much by what he pretends as by what he *does* and *is*. Therefore, the man who is poor had better not undertake to soar as high as the rich can. No business man whose capital is small can do it without plunging into debt, which will likely break him. The credit system, within what is called its safe limits, is a curse of America; how much more so are overponderous debts. *Live within your means.* If you have an income of only five hundred dollars a year do not spend six hun-

dred, nor even five hundred if you can help it. Health may be lost, and old age will come when you will not be able to earn money as you now can. Therefore you need accumulate some means for future wants and emergencies sure sooner or later to arise.

BREAKING DOWN.—Every young man should thoroughly learn some legitimate trade, business, or profession, and pursue it with laudable industry and his best talents. If he does, then generally he will not be obliged to depend upon uncertain events and exigencies for his bread and butter. He may fail in business; and if he does, it is a man's part to go manfully to work and retrieve his fortune. But a man ought to know from the start and appreciate the full value of his knowledge that it is wholly disreputable to "break down" for profit. If, for instance, he is a merchant, and has purchased goods for a certain number of dollars in promises to pay, he honestly owes the same number of dollars, which he is under every obligation to pay in full if it is in his utmost power to do so; not any nominal part of it which he may deem his financial interest to pay, but *all*, and that obligation morally continues as long as life continues, bankrupt law or no bankrupt law.

Determine not to make a failure of business. But what if failure will come in defiance of all our efforts? Shall we give ourselves over to discouragement, inactivity, or intemperance? Or shall we go manfully to work and *regain* what we have lost? It is said that in the midst of the battle of Shiloh an officer rode up to General Grant and said: "Sheneral, Schwartz's battery is took." "Well, sir," said Grant, "you spiked the guns before they were taken?" "Vat! Schpike dem new guns? No, Sheneral, it would schpoil 'em." "Well, then, what did you do?" "Do? Vy, we went right in and took 'em back again."

The lesson is obvious. Profit by it.

Read the following lesson from an old merchant. The veteran and honorable merchant, Jonathan Sturges, of New York, at the dinner given in his honor, on the occasion of his retirement from active business, gave the following golden counsel to young men:

"Now, gentlemen, since there is nothing that I can talk about that you do not understand a great deal better than I do, I propose to say a few words for the benefit of the young men outside, and if you approve of what is said, let it be considered as said by this Grand Jury of Merchants now assembled.

"One of the first lessons I received was in 1823, when I was eleven years of age. My grandfather had collected a fine flock of merino sheep, which were carefully cherished during the war of 1812–15. I was a shepherd boy, and my business was to watch the sheep in the fields. A boy, who was more fond of his books than of sheep, was sent with me, but left the work to me, while he lay in the shade and read his books.

"I finally complained of this to the old gentleman. I shall never forget his benignant smile, as he replied: 'Never you mind; if you watch the sheep, you will have the sheep.' I thought to myself, what does the old gentleman mean? I don't expect to have any sheep. My aspirations were quite moderate in those days, and a first-rate merino buck was worth $1,000. I could not make out exactly what he meant, but I had great confidence in him, as he was a judge, and had been to Congress in Washington's time; so I concluded that it was all right, whatever he meant, and went out contentedly with the sheep.

"After I got to the field I could not get that idea out of my head. Finally, I thought of my Sunday lesson, 'Thou hast been faithful over a few things, I will make thee ruler over many things.' Then I understood it. Never you mind who else neglects his duty; be *you* faithful, and you will have your reward. I do not think it will take many lads as long as it did me to understand this proverb.

"I received my second lesson after I came to this city, as a clerk to the late Luman Reed. A merchant from Ohio, who knew me, came to purchase goods of Mr. Reed. He expressed his gratification at finding me there, and said to me: 'You have got a good place. Make yourself so useful that they cannot do without you.' I took his meaning quicker than I did the proverb about the sheep. Well, I worked upon those two ideas until Mr. Reed offered an interest in the business.

"The first morning after the copartnership was announced, Mr. James Geery, the old tea merchant, called to see me, and said to me: 'You are all right now; I have one word of advice to give you, be careful whom you walk the streets with.' That was lesson number three.

"In this connection I must repeat an anecdote told of the late Robert Lennox. A country merchant came into the store of Mr. Morton, a highly respectable Scotch merchant, to purchase goods. He spoke about credit references, etc. Mr. Morton said: 'I will give you what credit you wish.' 'But,' said the merchant, 'I am an entire stranger to you.' Mr. Morton replied: 'Did I not see you at church with Robert Lennox?' 'Yes, I was at church with him.' 'Well, I will trust any man whom Robert Lennox will take to church with him.'

"I hope these three lessons of watchfulness over the interests of their employers, watchfulness over their partners' interest and their own, after they are joined, followed by intense watchfulness that no black sheep creep into their folds, may be impressed by these anecdotes upon the minds of those for whom they are intended.

"One other lesson I feel it very necessary to inculcate—that of patience.

"With a little patience, most young men will find a position as high as they have fitted themselves to fill.

"In all the changes which have taken place in my firm since 1822, no partner has been brought in who has not served as a clerk in this establishment. And I now leave my house well organized, prosperous, and free from complications, still in the hands of those who have served in it as clerks, for a longer or shorter period. I mention this as an encouragement to young men to persevere in the faithful performance of their duties."

MANNERS.

"A good presence and a good fashion in a person, are continual letters of recommendation."

Emerson says: "The power of manners is incessant—an element as unconcealable as fire. The nobility cannot in any coun-

try be disguised, and no more in a republic or a democracy, than in a kingdom. No man can resist their influence."

Manners may be defined as man in motion. But activity of the body or of the mind is not essentially *good* manners. Sidney Smith says: "Good manners are the shadows of virtues; the momentary display of those qualities which our fellow-creatures love and respect. If we strive to become, then, what we strive to appear, manners may often be rendered useful guides to the performance of our duties." But to appear what we really *are*, and *be* what we *ought* to be, are perfections to which few or none attain. Persons who care not what others think of them, may indeed appear as they *are;* those, however, who *do* care, sometimes would prove to the world, by their mannerism, that they are perfect, whereas, "no man is perfect; no, not one." Thus I have sometimes seen one put on the most excruciating gentility; or a presumption of great wisdom by one who had little reason for so doing—no more reason, perhaps, than having been to Europe! Now it is perfectly proper for one who is able and has leisure to go to Europe, but a promenade on the streets of Paris or of London, or a view of the "mighty Alps," can have no such talismanic influence on the intelligence or moral worth as those who are so infected would have us believe. One may travel quite extensively in the old world, and yet not be much nearer a paragon of wisdom, more of a gentleman, or of a lady, than a visit to the great trees, mountains, and cañons of the wild West would make them. Perhaps not as nearly a model of wisdom, for the whispering leaves that live in the life of those mighty trees may preach to one sermons of past centuries.

They are in the highest sense ladies and gentlemen, who are the most pleasing and satisfactory to the best human nature of others who are cultured and good. The behavior of man depends, greatly, 1st, upon the natural mental organization; and 2d, upon the degree of culture of special faculties of the mind; the chief of which, the corner-stones, are good sense, fine sense of propriety, self-reliance, and love. The force of these faculties developed and in action may be stated as follows:

Good sense, in a general way, will save one from doing or saying shallow things, and direct one in a reasonable course. A fine sense of propriety will cause a person to say and do what is proper, at the proper time and place. Self-reliance, without egotism, will make one *natural* in behavior. The person who is not self-possessed is a source of uneasiness and of pain to all in his presence, for his deportment is unnatural, timid, and indicative of weakness. Love is the fire which burns away hatred—the great good which assimilates all it approaches. Upon these four faculties as the basis of good manners, let one build the superstructure with self-respect, respect for others, truth, sincerity, reality, good taste, fine perceptions, happiness of disposition, heartiness and sympathy. One perhaps may possess, in a latent state, the most of these faculties, and still not manifest the deportment of a lady or a gentleman. But let these faculties be properly cultivated from childhood to adult age, so as to habituate them to social activity, and everything else favorable, then the man's presence will be that of easy dignity, and the woman's that of easy grace, and either will be a colossus in any society, to which talent and beauty will bow in reverence.

The average man is too gross readily to assimilate into his nature and master all these virtues. There is great need for Americans to cultivate graceful and noble demeanor. To do this successfully it is necessary, with many, to keep more in the background "his majesty, myself," brute action, the grosser nature, and whatever else that is hateful to the best humanity and to the highest society, and to educate more carefully the love of the beautiful, the adaptation to social fellowship, all the finer attributes of the mind, the higher excellencies of character.

Man is a social being; and in his social condition each owes to others certain duties—certain behavior, which it is the business of social ethics to teach. But ethics cannot teach or establish a settled ritual of deportment, for the very good reason that intelligent people cannot, will not, and ought not to be made puppets of. And then, in different persons there is a

difference in natural organization, and the degree of culture. Therefore in good society, manners, in both form and moral excellence, vary with each individual composing the society. Nevertheless if every child at home were placed under favorable circumstances for the proper culture of those faculties which make up a social being of good presence, if when children become young men and young women they would assiduously continue the education by learning from men and women of good manners, and of good society, Paris would need to strike out the words, "Horrid Americans" from their vocabulary. So far as possible, parents should see that their children *are* placed under such circumstances for home's sake, as well as that of general society, for there is no place like home. *There* dwell the best treasures of our hearts. Therefore to make home the most pleasant and attractive place in the world should be our universal and important aim. As our lives begin in our homes, so do our manners, and it matters much whether we make them good or ill. Other things equal, that home is happiest whose inmates feel that others have rights which each is bound to respect by acts of kindness, of charity, of forgiveness and of *love*, all of which are included in true politeness. Hence good manners should be thoroughly nurtured at home, whose influences shall extend everywhere, and everywhere diffuse the most brilliant glory of the best human nature.

What beauty is to woman politeness is to man, and politeness in woman is more precious than beauty. Winning manners in a man not only help him on in relation to business and success, but also give him greater influence and power, captivating the hearts of both sexes. Had Raleigh never flung his cloak in the mud for the proud Queen Elizabeth to walk on, the career of Raleigh might, long since, have been lost in the labyrinths of time.

We are all more or less sensitive and sensible of the influences of others. Man is often a complex system of attraction, or repulsion, but not always. One diffuses discomfort and ill temper everywhere; another reflects a warmth indeed, but a warmth that chills; another feebly radiates a characterless cheer

akin, perhaps, to social silence; still another sends out a blaze which glows and cheers and makes happy, for it is replete with sympathy and love.

True politeness does not consist of an unbending, inapproachable manner, repellant as a polar blast, neither does it consist of a low buffoonery—though some seem to think so—nor indeed in any external appearances alone, but rather of that sweet, magnetic soul-power, exhibited in action, which wins your confidence and your esteem.

1. As a man may "smile and be a villain," so he may possess a mere show of politeness, and be villanous. 2. One may have honesty and affection, and good-will to his fellows, but lock these attributes so closely within his breast, that most men will turn away from him, rather than attempt to break through all his hardness, roughness and coldness in a process of investigation. 3. Another is exquisitely, painfully genteel, and yet so shallow is he in his politeness as to appear the sycophant. 4. Another is polite solely because he believes it subserves his financial interests to be so. 5. Another is polite in his way, and yet so rough is he about it as to appear rude. Nature has done enough for the second and the fifth mentioned cases. Nature has apparently done nothing for the first, and foolish training has made an idiot of the third. Whether nature has done anything for the fourth or not, at least insatiable avarice has made him a superficially polite, dishonest, soulless man.

An example of some of these classes may explain my meaning better. No. 2, for instance, is rigid in his honesty, in his temperance, and is a farmer. On his way home from the city he sees a man prostrate beside the road, and supposing him to be intoxicated, he passes on with scorn written on his brow. But he soon asks himself this question: "What if that man is sick and should die for want of care?" His answer is better than words, for he at once drives back and finding the man indeed ill, and a stranger, he takes him to his own home, and gives him the best care. In business, in society, and everywhere this man is the same—straightforward and rough. He seems *cold* until his sympathies are aroused, and then he is generous to a fault.

No. 3, when asked by a stranger the location of a certain church, answers, "Really, my dear sir, I grieve greatly to say it, but I cannot tell you." After the stranger has passed on this genteel(?) man runs up to him out of breath and half talks and half gasps, "My dear sir, you asked me how you could find the church, and it pained me to say that I did not know. Just now I met my brother and asked him, but I grieve to say that he did not know either."

No. 4. A stranger enters a city store, and is received by a polite bow, beaming eyes, and in the most gentle tones is asked, "What can I do for you, sir?" But the stranger don't want goods—he wants to find the way to B. street. Then presto! all is changed, and he is sharply told to "go west till you get there." Being a stranger in the city, he is not at all certain which way "west" is; and he timidly enters the store of No. 5. The man of tape receives him with a brusque bow, and a short, rough, "What can I do for you, sir?" The stranger feeling a "sort of an inwardness" that he has again "got into the wrong pew," hesitatingly stammers: "I am sorry to interrupt you, but I want to find B. street." The rough man bustles along to the door, out on the side-walk with the stranger, and pointing his finger, says: "Go along this street till you get to the first one that crosses it—and that is B. street."

Manners on the Road, etc.—One law of the road is, when one team meets another, each must give one-half of the track. Now we often meet men who claim the right to the whole track as if they were the owners of it. So they compel us to give all, even at the risk of having our own lighter vehicle jostled, broken or upset. Common courtesy as well as common sense will suggest to a polite traveller who has a light carriage, or an empty wagon, the propriety of his giving proper extra privilege to a loaded wagon; while also a polite, a decent man with a loaded wagon will not crowd another into the ditch because the other is not loaded.

Another law of the road is, if one wishes to pass a team going in the same direction with himself, he has a right to do so without voluntary hindrance of the other party. One of the

instructions of Judge Bagg to the jury, in the case of Boies *vs.* Nelson, concerning this law, is as follows: "It is the privilege of one who desires to drive faster than another to do so; and he may legally pass the other by turning out on the right hand side of the other party; and the other party has no right to prevent him from doing so; and any act which would tend to hinder or delay him, would be technical trespass for which he would be liable. A party will not be justified, when one desires to pass him, in driving up a little way, and then stopping or slacking up, and as soon as the other party again attempts to pass, to once more start up to a run, and the party so doing will be liable to answer in damages." Every one has more or less often overtaken this dog-in-the-manger sort of man who will neither go on himself, nor permit you to do so.

Sometimes again you come into contact with two teams standing side by side, thus occupying so much space as to prevent you from passing by, the men conversing with entire deliberation, keeping you in the meantime waiting as if your time was theirs in fee-simple. In all such cases you may know your rights, and yet you hesitate to assert them and arouse an angry dispute.

If in a crowded assembly or car a gentleman proffers his seat to a lady who is standing, and if he receives in return a kind "thank you," he feels that he has surrendered his seat to one whom he is ever ready to oblige; but if she takes the seat in a matter-of-course way, or with that ungentle expression on her countenance which speaks louder than words, "a *gentleman* would have given me a seat sooner," the gentleman wishes in his very heart that he had not given it at all—and the wish is pardonable. A woman is often just as able to stand from ten minutes to an hour as the man, and she has no stronger moral claim to the seat than he—not as strong when he is occupying it; but it is customary, and the custom is a pleasant one, to give the preference in these matters to the ladies. They as ladies ought to regard it as an act of courtesy on the part of gentlemen, and acknowledge the favor accordingly.

If on the sidewalk from four to six ladies abreast meet a gentleman, and they separate, giving him room to pass by, they do a ladylike act; but if they take an undeviating course, ignoring his presence, or crowd him altogether off the walk as if he were a dog, at the risk of his slipping on the wet stones of the gutter and bruising his limbs or breaking his nose, the act is unpardonable. Well, perhaps he is a dog—perhaps all men are dogs; if they are they at least *wear* the human form, and, pretty dears, they are your *brothers!* The woman is indeed fortunate who possesses the pleasing, graceful, cordial manner—that undefinable witchery that wins the esteem of all. But every lady should remember that those highest excellencies come not forth but from genial impulses and warm emotions of her woman's soul.

In the varied course of human life there are a great many roads, and all manner of folk journey thereon. While a great majority of mankind may be inclined to give rights as well as to take them, there are certain evil spirits who make it their business to accommodate *themselves* and jostle against their neighbors. There are other ways, however, than physical force by which to jostle our neighbors. Our tongues make us play often and well at the pleasant game of beams and motes. It is diamond cut diamond; hit and hit back again. "Did you notice Emma's horrible bonnet? A pretty thing, indeed, to wear to church!" asks and exclaims Angeline. At the same moment Rosa and Samantha are in the next house reproaching Angeline because she has large feet—large as an elephant's! "I am going to see Anna to-day, have you any message?" "I wonder how you can visit that dreadful girl! Give her my love, dear."

"Did you know that Miss Finch was seen last week under very questionable circumstances?" asks one. "Was she?" "How?" "Where?" "When?" "With whom?" And then follow a whole chorus of winks and whispers and hints—all very gentle and regretful, of course!—little zephyrs floating along from tongue to tongue, and often over a territory commensurate at least to Miss Finch's acquaintance. The little hints thus began at the lady's tea-party go forth, adding force to force, until a universal storm of scandal shall sweep away that

which is most dear to woman. Such are the manners of far too many men and women, and of far more women than men; for it is a fact, though the fact may be rather unaccountable, that woman is far more severe against and intolerant of the misdeeds, or the presumed misdeeds, of their own sex than are men of women's misdeeds, or those of each other. They may be, and often are, ladies in other respects—intelligent, kind and sympathetic of heart, beautiful; yet in this the subtle serpent seems as fascinating to them as once he was to lovely Eve. They certainly cannot realize that their sly or treacherous insinuations are as ruinous to character as is the terrible tongue of open scandal, and ruinous often to the innocent and pure. Let me not be misunderstood. The disposition whose breath is scandal, and the scandal pestilential, does not by any means belong to all the members of the fair sex. As there have been from the most ancient of days women whose tongues are venomous either from nature or habit, so are there now; but there are also endless thousands whose goodness of soul is commensurate with their charms. Amid and around the few who are ever alive to explain events by contemptible causes, and to interpret appearances in an unfavorable light, there are many who have learned that what seems unchaste or mean is often not really so; who, surrounded by an infinite complexity of appearances and diversity of character, can interpret good with intuitive kindness, the doubtful and the bad with ample charity. *That is politeness.*

Our manners should bear the stamp of consistency. A man has, for example, a right to decide that the drinking of tea is destroying the human race. But when he rushes about the country with the wailing cry of "Death in the teacup," while in his own life he is defying the laws of health in that he bolts his food, fills himself with rich cakes, confectioneries, and other villanous things, keeps late hours of nights in questionable places, we are inclined to feel that, though temperance in drinking is a good thing, temperance in eating, dressing, and living, is also comely.

We sometimes meet with a woman who, in attempting to be *very much* of a lady, seems to be composed principally of

modesty as false as conceited. The following quotation will, perhaps, explain my meaning. A gentleman who is carving a turkey (several being present at the table) asks a young woman, "Shall I help you to the leg?" She thrusts her napkin to her blushing face and answers: "Yes; but please cover it well with gravy." She would undoubtedly have fainted had the leg been presented uncovered!

There is not an immodest *lady* in existence, nor will there be until blackbirds are white. Therefore every woman should be modest, certainly. Her pure heart should be the home of modesty; her intelligent brain and chaste lips should give it utterance, and her intelligent brain will save her from a shallow display of shame when she has occasion to speak or hear spoken words that need be spoken.

My friends may be surprised that I should write upon such a subject as manners. They will therefore pardon the following bit of autobiography in the way of explanation:

General Putnam was not a polished gentleman, though he probably had a rugged common sense. He seemed to suppose life to be composed of too dry and stubborn facts to be wasted in the simple matters of politeness. My mother was a Putnam, and she probably inherited in some degree his mental qualities and temperament; yet her manner was toned down by womanly modesty, a sweet disposition, and the most tender sympathy, it seems to me, that I have ever known a woman to possess. The kindest and most affectionate of mothers; I can never breathe her sainted name without the most profound feeling of adoration. I was honestly nurtured and with the most loving care—God bless my dear mother! Yet influenced by a sort of Putnamic atmosphere and by heredity my manners came out rather homespun. Manners should be chiefly spun at home; mine, however, were not spun quite fine enough—not so fine as they would have been had I performed my part less thoughtlessly. And nature made my disposition so firm that early habits became as fixed as the solidly-imbedded rock in the bosom of an eternal hill. Hence, drawing-room manners I shall leave entirely to polite society authors. We have had here to do with

the conduct of life outside a mere fashionable life. Anything more than this would be presumptuous in me. It would, however, be a matter of great regret to me if I were lost to a deep feeling of sympathy and of love to man, and especially to my friends. I am gratified to know that a few at least have penetrated my inner soul and given me all the praise I deserve and more. When patients of mine say of me that my presence does them more good than medicine, I know they have broken the rough exterior and gone down to my heart, and found something of the anxiety and the sympathy I feel for suffering; and I take such words as a compliment, the most dear of all praise, and hereby gratefully acknowledge them, and for the recovery of those under my professional care would fain raise the little skill I have to a far higher plane and my labors for them to a more earnest endeavor. Yet wanting in many of the nice civilities and sociality which tend to make social life pleasant, no lady need be surprised to see me swoon away if ever I should venture to lift my hat to her.

The lesson which I wish to draw from the above words is this: those who are young should take an intense interest in their own culture. That they be not uncouth or shallow in their manners because their father or mother or somebody else is. That they shun the evil and adopt the good. That each may make of himself or herself, a polite, sterling gentleman in the one case, a graceful, winning lady in the other. In order to achieve these excellencies in their perfection, know that it is important to commence young to build a character on a sound basis, to cultivate a politeness which others may see as the radiant sunshine—feel as a perpetual joy.

MARRIAGE.

Young men and young women, during certain years of their lives, are absorbed, and deservedly, with the themes of love and marriage. But strangely enough, the psychological and physical relations between the sexes, receive, either generally or specifically, very little attention. With a great proportion of the marriageable, love is but a crazy, ungovernable passion, which usurps the throne of common sense; and hasty, thoughtless, unsuitable marriages are the result; and repining, infamy, cureless unrest are the price. Therefore, he who succeeds in arousing the reason, and rendering marriage a subject of candid, thoughtful preconsideration, deserves a rich reward. I shall not strive for that. My endeavor will only be to give some outlines of the great subject, in a few of its special topics. If in these things I can but partially awaken the interest of the young people, they will begin to understand that animal passion is not *all* that should be considered in mating a couple for life.

I discuss this subject in plain words, and none but shallow persons will take alarm. The illustrious Haller said, "there are no secrets in physiology," and he said rightly. There should be no secrets in anything, to know which is for human welfare; no truly modest man or woman need blush to hear such facts or to speak them. Wise or sensible to withhold knowledge which is really essential to the well-being of every man and every woman, as well as that of their offspring? The study of the physiology and philosophy of marriage in all its aspects, is as legitimate as the study of the physiology of respiration, circulation, or of the nervous system. The Bible itself does not treat these things with contempt. God has so universally implanted love in the breasts of man and woman, that when it is sung to us by the poets, human hearts beat a ready, harmonious response. And when a man and a woman are suited to each other, and united in wedlock, if they are of affectionate dispositions the affinity is so strong, so close, so dear, that no power on earth but death can part them. Shall our mouths be so

dainty, then, as to part us from the knowledge of things which pertain to the everlasting weal of humanity?

OBJECTS OF MARRIAGE.—We can better understand the chief and true objects of marriage by viewing the generation in the vegetable kingdom, but the view we can take here must be greatly limited. Let me say enough to give any one who has not noticed these things an interest to study them more deeply.

In the scale of creation, the vegetable kingdom finds a place between the mineral and animal. The link which connects certain forms of the vegetable with the lowest of the animal, is very short, and almost indistinguishable.

Vegetables are living, organized beings, but distinguished from animals by want of nerves, muscles, digestive cavity, and mental faculties. While destitute of mental faculties, and even a knowledge of their own existence, and probably of sensibility, they do possess contractility, which seems not remotely allied to sensibility.

The chief elements of which animals are composed are oxygen, nitrogen, and hydrogen; vegetables consist of oxygen, carbon, and hydrogen, with some other material common to both kingdoms.

Vegetables, as animals, are provided with organs of generation; but the male and female organs are mostly situated on the same stalk, which grow, mature, and generate their species together, while male and female animals must search for each other.

The sexual organs in plants are situated in the flower, and reproduction is exceedingly interesting, in comparative acts of generation. The flower in most plants is composed of the pistil, stamen, calyx, and corolla. The pistil is situated in the centre of the flower, and is the female sexual organ. It is composed of the ovary, style, and stigma. The ovary, when matured, contains small grains or ovules. The stigma is the superior part of the pistil, the function of which is to transmit the pollen or fecundating powder and fluid of the male organ to the ovary. The style is a small canal, situated between the ovary

and stigma, the office of which is also to transmit to the ovary the fecundating matter. The style, however, is not present in all plants.

The stamen is the male sexual organ, which fecundates the female organ or pistil. This organ is composed of the anther and filet. The anther is a membranous sack, which contains the pollen; the pollen consists of small seeds or grains, containing a fluid, the odor of which is similar to its correlate in the animal kingdom. This is the fecundating property of the male organ of the plant.

Flowers generally have more stamens than pistils. Therefore, each female of the plant has more than one husband—emphatically anti-Mormon.

The calyx is composed of leaves at the periphery of the flower, external to the corolla. The corolla is situated within the calyx, and without the stamens and pistils, and is composed of leaves of various colors and forms. These emblems of beauty, which gain and deserve our admiration, protect the essential male and female organs of generation, and have been by Linnæus called the theatre of the amours of plants. He writes, "The flower is the nuptial bed, the anthers are the testicles, the pollen the fecundating fluid, the stigma is the external female aperture, the style is the vagina, the ovary the womb, the mutual action of the stamens on the pistils is the consummation of sexual intercourse."

When the flower is fully developed, and not until then, the male and female organs become contractile; the anther of the stamens becomes erected and approaches the stigma, or the female genital fissure, and wastes the pollen, or prolific grain and fluid, which being absorbed by the female organs fecundation takes place, gestation goes on, and the expulsion of the seed, or ovarian fruit, in due course ensues.

Now physiologically plants are so constructed as to be manifestly destined to accomplish two great purposes: 1st, nutrition or self-preservation; and 2d, the perpetuation of their species. The latter teaches us some valuable lessons concerning the perpetuation of the human species.

Let us for a few moments direct our attention to the physiology of the human sexual organs. The generative function is dormant in childhood. It is active from puberty to the cessation of menstruation in woman, and to a very old age in man. Thus the sexes are mutually capable of procreating during the period of life in which man and woman are vigorous, and able to support and educate their children.

WHEN TO MARRY.—Puberty, as a rule, begins in the girl at the age of from twelve to fourteen, and a little later in the boy. It is characterized by a most rapid development of the sexual system and chest, while the powers of other portions of the body and vitality are generally lowered, more greatly so in the girl than boy. An indescribable mental excitation towards the opposite sex occurs, and the change is imperious. The boy in his *general* deportment is audacious, but towards the girls timid. The girl is shy towards boys, characterized by a virgin modesty. Her form is more elegant, her face more lovely, her manners more winning, and she is altogether charming.

During the incipient stage of puberty the boy's voice is changing and "squeaky;" when fully established, the young man's voice becomes strong and full, the chest expanded, the constitution usually more robust, the mind augmented, and he is prepared to enter into all the activities for which he was made.

The young lady on the other hand is tender and delicate longer, yet she too gradually matures. Her bosom throbs with the impulse to have a lover; not so much, however, for any lower purposes, as for the beautiful rounding out of her sympathetic, higher nature. They both begin to feel that their real existence depends on an intimate union of soul with the soul of the one they love. What can be more delightful than the innocent love of two young persons of proper age, who are drawn together by the chaste inspirations of their throbbing hearts? A glance, a whisper, or a touch thrills them as a charge of electricity endowed with the fruitions of paradise. This, however, is an epoch in their lives fraught with danger, for the fervid, inconcealable fires of their souls may leap their bounds, and the vic-

tims will be two pieces of beautiful ruins. He will marry her? Barely possible. The rule, however, is, that the moral fruits of illicit love are disgust and desertion on his part, and unutterable disgrace on hers. Every young lady should repel with contempt every immodest advance on the part of a young gentleman; and to save herself and him from uncontrollable temptation, she should never receive his visits beyond the hearing of others.

The sexual organs are capable of the reproductive function nearly at the commencement of puberty. Should boys and girls therefore marry at that age, and bring forth children? How does the physiology of plants answer this question? 1st. Copulation in plants for the perpetuation of their species does not take place until the flower or the sexual organs are fully matured; 2d, while the plant is growing, if the flowers are not allowed to mature and propagate, the growth of the plant will be the more rapid, because the flower nutrition goes to the nourishment and growth of the plant. For exactly the same reason, we should expect that premature marriage or precocious sexual intercourse would, in a greater or less degree, be attended by an arrest of physical and mental growth, and a diminution of vital force. Experience has not only demonstrated that such is the case, but also that precocious marriages, as a rule, "produce small and contemptible men." Dr. Ryan well says that "It is universally known, that premature or excessive exertion of any part of the body is succeeded by fatigue or decay of such part, more especially before complete development has taken place. It follows that the premature exertion of the genital function, or marriage at too early an age, must not only be highly injurious to the parents in most cases, but also to the constitution of the offspring. It is also a moral and physiological precept, that both male and female should observe the strictest continence until the adult age, so that the great end of marriage, the propagation of healthful infants, may be accomplished."

It is not an easy matter to determine exactly at what age men and women should marry, but comparative physiology, reason,

and experience teach that no person ought to marry until his or her whole body and mind are pretty well developed. Though this development is rapid from the commencement of puberty, neither does the sexual organs, the body in general, nor the mind in temperate latitudes, mature until about the age of from twenty-five to twenty-eight in man and from twenty to twenty-five in woman. Consequently these are the ages at which it is most proper to marry.

The assertion that animals copulate in their immaturity is denied by the best authorities, except in the case of a few domesticated animals. If those few animals have followed the examples of beardless youths and immature girls, who is to blame for it?

LATE MARRIAGES.—A first marriage after the man is forty, and the woman not under thirty-five, nor over the age at which her menses cease, is often fraught with evil; for the husband is (or ought to be) unused to close intimacy with woman and therefore knows not her nature. He has become selfish and often egotistic, and is apt to become a domestic tyrant. The wife is also changed and usually unfitted to coalesce in a perfect union of wedlock. Besides, certain muscles and other parts have undergone a change, so that if she bears a child there is more or less danger attending the parturition.

Again, if an old man marries a young woman or a young man an old woman, it is generally for money, or a home, or some other selfish motive. The disproportion in their ages frequently leads the younger person to illicit amours by the one and to the tortures of jealousy in the other. Besides the constitutions of children resulting from the marriage of an old man with a young woman will often partake of their paternal feebleness.

If two aged persons who have passed the age of procreating choose to marry for their mutual society, comfort, or help, as they float down the stream of time, I can see no objections.

According to the laws of ancient Sparta when a young woman married an aged and impotent man she was allowed to choose a male adjunct to the family; in some other countries similar

privileges were granted. In our own country there are no such laws, but the *practice* is sometimes the same. Ill-assorted marriages, whether existing in disproportionate ages or not, are bids for clandestine concubinage, and the truth of it should be impressed upon the minds of the young of both sexes. While it is certainly the duty of young people to ask parental advice and weigh it with all reasonable consideration, they still have an inalienable liberty of choice whom they will marry; and since their life-long weal may depend on how wisely they choose, the selection should be wisely made.

Society.—Man is a social being. Society, mutual aid, and sympathy, are essential to him. The infant is born a frail, helpless being, whose life is held by so fragile a tenure that its survival depends on another being, not itself. Surviving until the age of manhood or womanhood the heart grows warm and reaches out for a congenial one of the opposite sex. Hands and hearts are clasped, children come to them, dear little creatures, frail as themselves once were, and standing in the same need of help. The parents care for them, grow old and infirm as when they were children; while their children are now robust men and women, who in their turn kindly care for their parents, until at last their lives go out amid the sympathy and anguish of loving sons and daughters. Such is the family.

Then families are associated with weaker ties to other families, depending more or less on each other, and the relationship extends everywhere, forming one magnificent whole. Marriage is the means by which this great compact of dependencies is sustained. It is evident, therefore, that the weal of domestic and general society depends upon how couples are mated and what manner of persons become fathers and mothers. Marriage is, therefore, a most important and sacred institution, notwithstanding the fashion of treating it as a feeble contract which easy divorce may annul. All the concerns of life are mutual. The man has given himself to the woman, and the woman to the man, with all the endearments and privileges that the gifts imply—perfect sincerity of the higher friendship, the fruit of the mental and moral nature, mutual love, which *may* mean the enjoyment of their own mutual heaven.

To healthful, well-formed persons, at a suitable age, a happy marriage is undoubtedly conducive to longevity; not so, however, under certain abnormal conditions. I commend the following precepts from Dr. Hufeland a little modified:

1. It is desirable to marry into a family remarkable for longevity.

2. One who is young should not marry another advanced in life, delicate, feeble, or affected with any deformity or disease, and more especially a disease which is transmissible by generation.

3. Married pairs should give themselves to the pleasures of reproduction only when the natural impulse is strong; and above all avoid propagation during drunkenness.

4. Every pregnant woman ought to be considered as a laboratory, in which she prepares a new being, to which the slightest physical or moral emotion is injurious.

HOW TO CHOOSE A WIFE.

"What is love? Go ask the angels;
They of all can truly tell:
And of hatred, ask some demon
As he enters his dark cell."

. . .

"Auld Nature swears the lovely dears
Her noblest work she classes O:
Her 'prentice han' she tried on man,
An' then she made the lasses O."

. . .

"The fountains mingle with the river,
And the rivers with the ocean;
The winds of heaven mix forever,
With a sweet emotion;
Nothing in the world is single;
All things by a law divine
In one another's being mingle:
Why not I with thine?"

ARE YOU WORTHY?—A reputed wise man struck hard, but with little effect, against human nature, when, in answer to the question at what age ought a man to marry, answered: "A young man, not yet; an elder man, not at all." These words are often pertinent to both sexes; for there are men and women

who never should marry, and their name is legion. Therefore, the first thing a young man who is contemplating love should do, preparatory to matrimony, is to criticise himself *faithfully*. Ask himself, "Am I deserving a respectable woman? What about my habits, and my whole character specifically? Am I a man or a drone? Am I prepared to take a wife to my bosom and home, and treat her as a pure woman deserves? Or am I to take her to insult by my intemperance, my sour or tempestuous disposition, habitually going to the 'post-office' and remaining until a late hour, or by my uniform absence from home evenings, when no legitimate business calls me away, or am I to starve her by my indolence and want of energy? Or have I that kind of character which makes a man live on great but groundless expectations?" If such qualities picture you, I pray you marry "not yet." Wait forever before taking an innocent girl from a happy or a comfortable home to the home you will give her. If you can *never* marry her and be to her a true man and an affectionate husband, then never marry; so let the matter end. But if, after bringing yourself under a severe criticism, you find you are worthy of a wife and to be a father of children, there are many things to consider.

Love is the enchanting, enchaining felicity in life which at certain ages stirs the inner soul, draws man to woman, and woman to man, marries them, and makes humankind and human society enduring. A visitation of this sentiment involves a force so omnipotent as to make everything concerning the loved one seem poetical and supremely delicious. How the voice of the lover thrills the heart and awakens the emotions! What an electric charm lies in the glance of love! What a conquering power in eye meeting eye, and what a perfect satisfaction and radiant glory in the mutual surrender; all transmuting sordid earth into beautiful heaven, all blending in contented bliss. It would seem that wedded love should bring the highest human happiness, but it often proves the tragedy of life, and mutual woe.

Before and After.—George Sand has said that love and courtship end together. Too true in many cases. You have

seen patent medicine advertisements, in which a blotched and sickly face illustrated the "before taking," and a smooth, ruddy face the "after taking." Perhaps you have observed the perfection of human bliss beaming on the face of the bride of a month, and the woe-begone face of the same bride after a year of wedded life. A reversed representation of "before" and "after;" a consequence of an unpleasant disposition or of an ill-assorted marriage. You have seen other brides of happy wedlock lose perhaps a little of her honeymoon excitation of joy, and a quiet, affectionate, happy contentment reigning in its stead. *That* is marriage.

"A good wife is worth her weight in gold." This is a low estimate. Gold is but dross compared to the refined gold of a pure, cultured, affectionate woman or man. Would the marriage of two such persons make home a paradise? or even what a home should be to deserve the name? It would fill some important conditions, certainly, since culture, chastity, and love are essentials to conjugal happiness, but not *all* the conditions. This becomes evident when we consider the great number of divorces, and a greater number of unhappy marriages, not divorced, in which both husbands and wives are cultured, chaste, and affectionate. They find, from thorough acquaintance, that after all they were not made for each other.

I will hereafter mention a sufficient number of the conditions of a happy and of an unhappy marriage to put young men on their guard. They have need to be on their guard, for experience drives us to the unwilling conclusion that many matrimonial alliances are not made in heaven, but *are* made by mortals on earth, in an entirely inexcusable, haphazard manner. Too often the young man allows the fair one to take his heart by storm, or she allows him, nominally, to take hers for a home, or to save her from a maiden life, which she mistakenly imagines is ignominy.

Young people have an instinctive desire to unite themselves into pairs. Geese have a similar instinctive desire; but men and women ought to possess a distinct idea that they are endowed with something more than instinct, and that marriage

means something more to them than mating does to geese—future objects which belong to reason, esthetics, and all the higher human intellect. Therefore, the reason and all the higher faculties should, by every one, be thoroughly brought into practical activity in this most important transaction of life. It is hard to love and to be wise. But it is the duty of every person to be wise *before* loving.

The Chief Objects of Marriage beyond the perpetuation of the race are convenience, profit, home, happiness. If these are not objects which deserve serious, analytical, logical consideration, what human interests do? Why then should the most important act of life be the least considered by the discriminating powers of reason? Because love is thoughtless as well as blind. Because many love first and reason when too late. I wish you, therefore, to start out with this idea, that when you meet a young lady who seems lovable, and created for you to love, your first business is to cultivate an honest acquaintance, with the view of ascertaining whether or not she possesses qualities which harmonize with your own. After that is accomplished, there will be plenty of time to love or to not love her. "True love is founded on esteem, and esteem is the result of intimate acquaintance and confidential intercourse."

Matched but not Mated.—You will more clearly discern the meaning of what has already been said, and be prepared for what is to follow, if you patiently accompany me. First, it may again be insisted, that it is not generally wise to fall in love "at first sight," for then you really know nothing about the lady. A young lady may, from some unknown cause, attract a young gentleman, and make a tender chord in his heart thrill, and he may call it love, and hasten on to courtship and to marriage. The utmost coolness of reason and decision is demanded for those first impressions, because the charms of woman are peculiar and subtile, often to herself unconsciously so. The sudden arrow Cupid sends and which transfixes a young man's heart, may involve but a voluptuous passion, but in after years, if he marries the fair being, evolve the venom of deep, dark regret and a thousand woes. It may be well to here warn

young men against the idea of considering themselves lodestones of such omnipotent force, as to be the great centre of attraction for all womankind. A young lady may treat young gentlemen politely, and even bestow winning smiles on them, and still not mean love or matrimony.

Before loving then, it is generally well that a man become fully acquainted with the lady he fancies, keeping in the meantime his mind untrammelled. Let him manage to see her as she really *is*, and in all manliness find out her faults, as well as her virtues, and weigh them well. If she is then found as good and as wise as himself—what? Fall in love and propose marriage? Not yet; for it should be remembered there are thousands of husbands and wives smart enough and good enough, each for the other, and still not husbands and wives in the full, true sense of the term; because their tempers, tastes, or temperaments do not harmonize; or, because those essential magnetic affinities or forces which forever bind two souls into one are wanting between them. A pair mated or rather mismated thus know full well and with poignant regrets that they are not made for each other, and it becomes a serious question with them whether it were better to live together and make life as little miserable as they can to each other, or resort to divorce.

Charles Dickens is said to have been a wise reader of human character; he certainly was a keen, masterly delineator of human nature; but after all he made very little use of his powers when he chose a wife. The nuptial bands which at first seemed so strong soon parted, and "poor Catharine" and himself were left to tread the path of life, and go down to their death, separate and alone. The following is his sad requiem over the grave of their departed married life, as related in Forster's "Life of Dickens," which I quote because it is pertinent to so many, and so pathetic as to make the heart bleed: "Poor Catharine and I are not made for each other, and there is no help for it. It is not only that she makes me uneasy and unhappy, but that I make her so too, and much more so. She is exactly what you know, in the way of being amiable and complying, but we are strangely ill assorted for the bond there is

between us. God knows she would have been a thousand times happier if she had married any other kind of man, and that her avoidance of this destiny would have been equally good for us both. I am often cut to the heart by thinking what a pity it is for her own sake, that I ever fell in her way, and if I were sick or disabled to-morrow, I know how sorry she would be, and how deeply grieved myself to think how we had lost each other. But exactly the same incompatibility would arise the moment I was well again, and nothing on earth could make her understand me, or suit us to each other. Her temperament will not go with mine. It mattered not so much when we had only ourselves to consider, but reasons have been growing since which make it all but hopeless that we should even try to struggle on. What is now befalling me I have steadily seen coming ever since the days you remember when Mary was born, and I know too well that you cannot and no one can help me. Why I have written I hardly know, but it is a miserable sort of comfort that you should be clearly aware how matters stand."

What a mournful tale of unrest! Here were a husband and a wife possessing intellects and culture far above the average. That they also felt a broad sympathy and profound love for each other his letter impressively attests. Why, then, could they not "struggle on?" Why, indeed, could they not have lived happily together? He himself informs us that the conditions which made a happy wedlock impossible were "incompatibility"—"her temperament will not go with mine." Thousands of husbands and wives are placed in the same or similar positions. The remembrance of impossible harmony and impossible happiness, with the same harassed emotions, arise again and again in their troubled brains, and sink again and again in mournful echoes to their sad, silent hearts. But Dickens and those thousands might, as a rule, have avoided their unhappy positions if before marriage they had simply made acquaintance thorough, mutually frank, and honest. Take the warning.

Results of Incompatibility.—Besides the domestic infelicity arising from incompatibility of dispositions and of tempera-

ments, the sequence is often matrimonial infidelity. Men trifle with the affections of the fair beings who happen to come under their influence, and are not often repulsed. This arises in part from licentious natures or habits, but more often in the married from ill-assorted unions. Even pure-minded men and women, if affectionate, feel that they must sympathize and be sympathized with, love and be loved. Therefore, if they do not find that sympathy and love *within* they are tempted to find them *without* wedded life. The remedy for so sickly a matrimonial life is for man to make himself right morally, and then exercise greater care and judgment in selecting life-companions. In the matter of choosing a wife let the young man start out holding in view Dickens, Sumner, Shakspeare, and the rest, who were wise men and giants, though, unfortunately, so far as their home-life was concerned, they were giants shorn of their strength relative to love's divine harmony and sovereignty. The home of each might have been a paradise and not a ruin.

CHOOSE A SUPERIOR WIFE.—A man in his business relations is brought into contact with superior men and other educating influences to which his wife is not. Besides, his business is educating him fast and continually. On the other hand, a great proportion of women are situated after marriage so as to debar them from continual mental culture, except in a very limited number of directions. Therefore, at the time of marriage, the lady should be her husband's superior in intellectual culture. If she is not, he will in a decade so far excel her in knowledge and expansion of mind as to destroy, in a great degree, their enjoyable social relations. Shakspeare makes the Duke say to Viola in the Twelfth Night:

> "Let still the woman take
> An elder than herself; so wears she to him,
> So sways she level in her husband's heart."

These words, as we have already seen, are founded on a physiological law of the two sexes, and should not usually be disobeyed.

MUTUAL FRANKNESS DURING COURTSHIP.—Let us now be a

little more specific as to the importance of a thorough acquaintance. *Engagements*, as a rule, should be *short—acquaintance long*—long enough and thorough enough to enable the man to really understand the entire nature of the woman, and to enable her to understand him. Sometimes this is no easy matter, for if either has faults, neither will be likely to display them in the presence of the other. So of incompatibility of dispositions, tastes, or mental characteristics. It is thus for the benefit of both to be mutually honest, frank, and natural. Let such a course be explicitly agreed upon. Incompatibility better end the courtship than the married life. Then place yourselves under each other's analysis and synthesis and find out whether or not your mental and moral qualities clash or harmonize. So of each other's tastes, dispositions, temperaments, and currents of thought. The importance of this cannot be overestimated, and to be fully effective of good, close, continued vigilance and study are required, even under the most favorable circumstances. The special mode of study may be on the following plan: is the lady exceedingly orderly—"a place for everything, and everything in its place?" Is this the reverse with you? Then your disorder will always annoy her, and she will also annoy you on account of it. On the other hand, are you scrupulously neat in your person and nice in your tastes? is she the reverse? Then an unclean house or an untidy or dowdyish wife will be your constant vexation, and *vice versa*.

Of harmony in the currents of thought, an example may be given: if his brain is so organized that he is interested in, and likes to converse on scientific or literary subjects, and the lady's chief theme is dress and fashions, changing it from time to time to fashions and dress, his social intercourse with her after marriage must be limited. If she is a great talker, it is often well if the gentleman is not: but whether either or both are or are not, their minds should usually dwell on similar classes of subjects.

The young man perhaps loves money too well? Then it is well that his future wife does not love it quite so well, that a

golden mean may be drawn. But if a man cannot think or talk of anything but money, he should have no wife.

As examples of disposition, it may be stated that if both have quick, fiery tempers, it will not do, for obvious reasons. If one of them *must* have such a temper, the other should be mild to quietly absorb the fire of the other, and make it a latent force, or no force at all. If one is affectionate, and desires to give and receive caresses, and the other loves at arms'-length, it is not well, for they will become estranged as married life wears on.

Such examples might be multiplied indefinitely, but it seems unnecessary, since enough have been stated to serve as a basis for all.

THE TEMPERAMENTS.—The question of temperaments is an interesting and an important one—yet so vast and subtile that ordinarily it need not receive an exhaustive attention; for if all the other conditions are attended to by those contemplating marriage, the affection arising will generally involve a harmony of temperaments, and thus the end will be attained for which that subject is to be studied. Those conditions should be regarded—after which it should be remembered above all else, *that no marriage should be consummated without profound and true love.*

A learned Frenchman once asked a lady whom he had never previously seen if he should tell her which one of her admirers found the most favor in her sight. Permission being granted, he said: "He whom you most admire is a brunet, active, of quick movements, with dark hair and dark eyes, your opposite." The lady turned an impatient look to her brother and asked: "Why did you reveal my secret?" The Frenchman replied: "No revelation was made to me except through my knowledge of elective affinities." She herself was tall, blonde, slow in her movements, blue eyes, and light hair.

The word temperaments as here used means certain conditions of the human body, as to the complexion, relative size and activity of certain organs, such as the brain, muscles, etc.; and the influence which such conditions exert over the mind and

body. Those different conditions and the influence involved are usually specified under the following names: the lymphatic, the bilious, the sanguine, and the nervous temperaments.

The Lymphatic Temperament.—Had a man the lymphatic temperament alone, his body would be sleek, soft and fat, his mental and physical movements slow and languid, and disposed to indolence. If fairly aroused, he might be capable of exerting considerable force of intellect and of muscle; but he prefers not to be aroused.

The Bilious Temperament is characterized by strong, active muscles, black hair, dark skin and dark eyes, and generally by much mental force.

The Sanguine Temperament is that in which the person's blood is most active, the countenance florid, the animal passions strong, the hair either light or red, the eyes blue, the activity and zeal great, with rather an inadequate strength of body and mind to meet the demands of the activity.

The Nervous Temperament is that in which the person is highly excitable, his mental powers exceedingly active, his emotions the most intense, thought clear and rapid, body active, hair fine and light colored, complexion fair and delicate; the activity of body, activity and intensity of mind are greater than the powers of endurance.

While we do not usually find a man or a woman with but one temperament, neither do all the temperaments often co-exist in any one person. If they do, then not in the most desirable proportion. The ideal man would be one possessing all the temperaments in a perfectly balanced combination. Other things favorable, that would make a well-balanced, model man. Nature in the force of her elective affinities strives to perfect the human race by so uniting man and woman in marriage as to produce this equilibrium. To further this, and for matrimonial harmony, a man intending marriage, in whom is predominant the bilious and nervous temperaments, should select a woman in whom the lymphatic and sanguine predominate. Or, in other words, that which is wanting in one should be made up in the other. Hence the value to every one of a knowledge of the

temperaments. In actual experience, attachment and love often naturally arise between men and woman because of their corporeal and mental dissimilarity without such knowledge. But it is not sometimes nor often that temperamental mating should be—*no* marriage should be consummated without it. Such union of the physical and mental traits of a man, with those of woman, so as to make a perfection of temperaments, is one very important condition for a natural and perfect marriage.

The chief prerequisites preparatory to marriage, then, are a *thorough social acquaintance, harmony of temperaments, and supreme affection.*

These hints given in relation to acquaintance and to temperaments should be of some practical advantage to young people in starting them correctly on the road to love, eventuating in a happy married life. Of affection itself, a few words may not be without advantage. Both men and women generally take it for granted that it is a most easy matter to determine whether they love or not. Not always so, however, for what, at first, seems the most ardent affection may only be an impetuous passion, or a fair magnetic enchantment whose scintillations shall by and by be extinguished, as surely if not as suddenly as the sparks from a blacksmith's anvil. You may know that you really and dearly love the one you esteem, if you are utterly unwilling to let your love be broken off, and if broken off, as determined never to marry another; if it is a pleasure to practise self-denial to make your dear one happy; if the judgment of your parents agrees with your own, but parents should have the good of the two persons most interested in view, instead of their own unreasonable caprices; if there is harmony of temperaments; if the language of your passions gives confirmative evidence of your love; if when separated for some months, affection diminishes not; if in your interviews, the meeting of your eyes tells your story in the heart's silent music which none may feel or know but they whose love is warm, and natural, and true. There is strong reason to believe that such love, if mutual, is never lost, and seldom changes. If a man

and a woman in all other respects are adapted to each other then such love means the perfection of marriage and enduring felicity. Those who marry without it must expect to pay the penalty.

The object of what has been here written is to assist, in some degree, marriageable men intelligently to choose wives, and marriageable women intelligently to accept the choosing; *not* to give facility to the already married, by which to select affinities in operations of free-love, or easy divorce, or by which to gratify the tempests of sensual passion. It is time that men and women had learned that the moral law of the sexes should hold authority, perfect *mastery*, over the passions run mad. Nature and reason should so guide those contemplating marriage as afterwards to leave little need for divorce, or free-lovism; so mated and so cemented in affection as to bring to the wedded pair perfect quietness of mind, and a noble exaltation of character. From the first they should feel a profound consciousness that each so supplements the other, so fills out and rounds out truest love, and living affinity of soul, as to form two happy beings into a perfect *one*.

Finally, in this connection, I advise if, after due and wise consideration, you find a just adaptation between yourself and your dear lady friend, and if you feel that your heart can beat with hers in quiet harmony through the rough, as well as through the smooth places on life's diversified journey, then *love* her with all the powers of your soul, if she will reciprocate, for you have found your wife.

THE YOUNG LADY—HOW TO CHOOSE A HUSBAND.

"May love with perfumed nectar fill high thy cup of life;
May sense guard thee as with an armor through coming strife;
May hope, that bird of paradise, ever to thee sing,
And never may a barb be placed beneath its folded wing.
Upward, ever upward may it bear thy thoughts on high
To the Beneficent Giver who dwells in the sky.
May'st thou see the bow of promise when the storms are dark,
And feel thou not deserted while it spans the heavenly arch.

"May Faith, fair enchantress, to whom great power is given,
Steal thy soul's deep longings and bear them up to heaven;

May truth be the helmet and fair virtue be the shield
That shall guard thee from the poisoned shafts the foe doth wield;
Sweet smiles of welcome greet thee wherever thou dost go,
Affection's purest language that's breathed so soft and low—
May these onward cheer thy bark till it reaches the bright shore,
And anchored there in safety it shall rest forever more."

. . . . . .

TO HIS LOVE.

"Come live with me and be my love,
And we will all the pleasures prove
That valleys, groves, hills, and fields,
Woods or steepy mountains yield.

HER ANSWER.

"If that the world and love were young,
And truth in every shepherd's tongue;
These pretty pleasures might me move
To live with thee and be thy love."

. . . .

"Before I trust my fate to thee,
Or place my hand in thine;
Before I let thy future give
Color and form to mine;
Before I peril all for thee,
Question thy soul to-night for me."

During a girl's transition of life, when she is budding into womanhood, and her mind is reaching out for fruitions yet unknown, longing for beaux, dreaming young love's fairy dream of a gallant husband and a delightful home, she is beset by many dangers. Developing in body and in mind, but neither matured, her girlish fancy and the fondness which she often believes arises to the dignity of love, assume at once fairy and fantastic forms, and with many, display themselves in silly actions in the presence of the boys. Every girl should know her aptitude at this age and be prepared to criticise and control her deportment. When associating with a young man, let her ask herself this question: "How would any other girl appear to me, acting as I do?" She also should be aware that there are some boys and young men who are not *perfectly* innocent or virtuous. It is therefore wise to closely watch all her gentlemen acquaintances, and yet in so

lady-like a manner as apparently to implicitly trust them. But if *any* young man deports himself before her in a way which does not become a gentleman, she should repel him in such a way as to teach him to thereafter keep his place.

While it is entirely prudent at this period of life for a girl to associate with those of the other sex at proper times and places, and in a correct manner, she should know her weakness and the danger to which it subjects her, and that she has no business whatever with a single thought of lovers and much less of matrimony. Her chief business is to attend to her corporeal, intellectual, and moral development. This should also be her strongest desire.

The good and the evil which young ladies do at this dangerous age usually spring rather from impulse than reflection. Consequently they so often yield to the soft-whispered voice of illicit love. *Not to expose thyself to temptation—this is thy safety.* Beware of the quality of thy gentlemen associations. Security here will often demand all of thy keen discrimination; for the smooth-tongued young man whom thou art so inclined to admire "may be of evil." Satan has power to assume a pleasing shape.

A young lady of good character need not feel obliged to treat dissipated young men as her equals. Those who deserve her social acquaintance should receive it certainly; but the base should be made to feel that they must first take the scalpel and so cleave away their baseness and their sins as to make a thorough change in their character.

When a young lady has arrived at that age in which her body is sufficiently matured to enable her to endure the laborious duties of a married woman without physical degeneration or detriment; when her mind has become so matured as to make it certain that she knows something of the import of marriage, something of the duties of a wife, and something of the philosophy of choosing a husband to whom she can cling all through life's sunshine and storms, as the vine clings to the oak, and still maintain a womanly dignity and a womanly individuality, then it is soon enough to take the subject of love and marriage

into serious consideration. At the *very commencement* of such consideration she should thoroughly scrutinize herself with the purpose of finding out whether or not she is worthy of a good husband, in her temper, qualifications, and character. For the purpose of escaping this duty, it is needless for her to inform us or undertake to make herself believe that she never need give herself a moment's uneasiness or thought concerning young men and love. She will find in due time that human nature is now much as it always has been—it always has had considerable inflammability in it. Love and the passions of both sexes are far more easily aroused than kept in submission to judgment. There is far more danger that a woman will love at random than not love at all.

Some suppose that affection between the sexes is involuntary and uncontrollable, and so beyond the realm of reason or preparation. It often becomes so vehemently ablaze as to get the better of judgment and will, and this is exactly what a young lady can and should guard herself against. But if it already has her under its control it is a more difficult thing to deal with. Even then there is a remedy, but the remedy cannot be efficiently applied without courage. It is this: affection lives and grows by what it feeds upon. Withhold its nutriment, and, as it usually does when hope is lost, it will wane and finally die a natural death. But the starvation may be a long process and involve a most miserable disappointment and bitter agony to the poor, dear, disconsolate woman. My dear girl, you may not indeed always be able to avoid impressions, but you may place them under the severest guard and say, with authority, "so far and no farther;" and for your best weal this is just what you must do until you win the dearest love of the man. Even in winning his love you should bear in mind that not only the declaration, but all advances should come from him. You can be an amiable, intelligent woman to be won; but neither custom nor delicacy will permit you to advance to love's field of glory to do the winning.

Woman, however, needs many accomplishments before she joins the innumerable throng of married women; and she

should require certain requisite and positive attributes in the man. The poet sings: "A little learning is a dangerous thing." It sounds better in song than in the affairs of actual, practical life. A little learning certainly makes persons of certain construction and combination of temperaments, vain and egotistical; while a profound education wonderfully frees one from self-importance: yet in all of life's activities even "a little learning" is not so "dangerous," as it is a necessity. But at a marriageable age, it is reasonably to be supposed that a young lady has received at least a fair school education. Not so in her domestic education. My young friend, do you know anything about domestic economy, wholesome cookery, and the philosophy of home-life? Are you proficient in those most excellent accomplishments? If you are, you have gained knowledge of much intrinsic, practical worth, and you shall be called blessed. But alas! how many ladies know nothing about these things!

Somebody has said that when a woman marries, her happiness at first depends upon the state of her husband's heart, but after that, upon the state of his stomach. An aphorism of Mr. Samuel Smiles says: "Those whom God has joined in matrimony, ill-cooked joints and ill-boiled potatoes have very often put asunder." Does the young lady retort that if a man has no higher aim than the gratification of his palate and stomach, the sooner he and his wife are "put asunder" the better? Well, man is an epicurean certainly, and so is woman, and there is no help for it; but there is more than epicureanism here. It is quite time that every daughter had learned that the state of the mind depends very greatly on the state of the body; that the state of the body depends much on the quality of food; and hence that something more is required even in a dietary point of view than merely a luxurious table—*it is, wholesome cookery.* Yes, home happiness depends upon good cookery, economy, industry, order, good nature, adaptation in marriage, and other conditions; the want of them causes misery.

John Bright paid a handsome compliment to Queen Victoria when he said: "She is the most careful and domestic woman I

have ever met." A brilliant example from a brilliant throne. John Bright all his life has been accustomed to the ways of Quaker women, whose wholesome cookery and careful habits are so well known: and his own wife, it seems, was not behind the rest, for when she married him she said: "John, attend to thy business and thy public affairs, and I will provide for the house, and relieve thee from all cares at home." And yet young ladies fear that the domestic virtues will disgrace them in the argus eyes of the world! If a young lady is beautiful, let her thank her Creator and be glad; but what can she say of her temper and other qualities? A young lady may have the beauty of the rose in its most delicate hue and softest bloom; and yet if her smile be a stab; if she is untidy, careless and negligent; if her room, drawers and wardrobe are kept in a state of chaos; if vain, or a coquette; if her tongue is venomed, and she directly or indirectly stings her friends with cutting sarcasms, scathing ridicule, or satire—she is indeed a rose, but a "rose set in thorns." Bacon correctly said: "Beauty is as summer fruits, which are easy to corrupt and cannot last." Summer fruits are good *while* they last, and so are a beautiful face and form. We cannot escape their magical influence if we would, and would not if we could, and it is quite senseless and needless even to make the attempt to undervalue them. We admit, and are glad to admit, that a young woman, if she is handsome, will conquer the admiration of men, and arouse the envy of women. God has made her beautiful, and it is well. But while a pretty face and form are desirable, she needs more than that—a cultured mind and charity, and a sweet disposition, and sympathy, and love, and all womanly excellencies—*a beautiful character.* These will give her not only the admiration of all who are acquainted with her, but their dearest esteem, and the exquisite power of surrounding all with a halo of satisfied joy; and so she will herself be the happiest of the happy—the sweetest rose, without its thorns.

The young lady who imagines that helplessness and real or assumed ignorance are genteel, cannot too soon learn her mistake. Good society not only expects her to be well informed,

but to practice what she knows in her social intercourse at home and abroad.

Good society and her friends also have a right to demand that she be womanly in her personal appearance and demeanor, neat and tasteful in her dress, and a representative of a pure and noble womanhood. This precludes her right of being and doing what she pleases, unless she please to do that which becomes a true lady.

Good society and her friends have a right to expect, and her own reputation demands, that instinctive and acquired amiability, modest reserve, and womanly dignity should rule her in her associations with gentlemen. *Then*, without making improper advances or *hating*, she will treat every respectable gentleman with cordial politeness; and when she meets the being in whom she seems to behold her future husband, she will feel that she is worthy of him, and will probably make him appreciate her worthiness, and that, in order to win her, he must prove himself a true man. Let me not be misunderstood. While a lady may not, like a gentleman, enter the ranks of men and cull whom she will, but must, in one sense, be the passive recipient of love, she need not be so in *every* sense. A brazen boldness, and a too obvious readiness to make or receive advances, she may be assured, will repel a sensible man, but never win him. That modest amiability, and that delicate winning manner which arise from nobleness of soul, a sweet disposition, and a pure life, and so much become her, contain enough of artless witchery to captivate the friendship or the love of the most obdurate of men.

No true woman cares to craze all mankind on account of her beauty or cunning, and she will not be that flashing, tantalizing, heartless, wicked thing—a coquette. The iniquity of the woman who plays with the earnest affection of any man will rebound, at last, in some manner, upon her own heart and life. And the man who trifles with the dearest love of any woman may not escape the woes he so fully deserves.

The custom of young ladies obviously seeking the attention of young gentlemen, by often sending them notes and invitations



SOCIAL RELATIONS

to interviews, is not good manners; neither does it win the higher esteem of gentlemen, but quite the reverse, or the coarsest sensual love. The same may be said of too evident pleasure, and too great familiarity in the society of young men. Womanly modesty, dignity, and reserve of manner, yet gracefulness, cordiality, and goodness of heart, will place the fair being in a far more charming attitude in the presence of the opposite sex.

A woman of a high type of beauty and culture wrote, at the age of nineteen, to Thomas Paine, who was a friend of her father, asking his most sincere advice whether she should become a Christian, as her mother was when living, or remain an unbeliever, like himself. Paine's answer was, that if she could believe in Christianity and become a Christian, he would by all means advise her to do so, for there was much comfort in religion and none in infidelity. While there are higher, better, and more profound reasons for being Christians, that from Thomas Paine was, from his standpoint of infidelity, sensible. There is not only "comfort in religion," but one *ought* to be a Christian. We owe it to God, ourselves, and to humanity. So far as it concerns a lady as an accomplishment after she has intellectual culture and refinement of manner, what but true religion can be added, which will blend so well with the beautiful harmony in nature, and make her a thing of beauty forever, that shall fill the house and her surroundings so completely with a constant flood of cheerfulness and happiness, most enduring and serene?

Some young women apparently believe that it is all sufficient, if they, on auspicious occasions, are amiable, modest, and pleasing in address. No woman can be a lady only on occasions which demand these excellencies. She must make them a part of her very being and acting. To be a lady of an amiable and graceful presence is no small accomplishment, and its worth is intrinsically and vastly great. One bitter word may cast a cloud over a family for a whole week. One loving smile or gentle word, which springs from a sweet disposition, is laden with sunshine, and gladdens the heart. As beautiful plants and blossoms

give freshness, beauty, and fragrance to a room, so perpetual kindness and sweetness in woman will make home the most lovely spot, and the most dear this side of heaven. Let woman, then, aim to make all happy around her, and she will have found the perennial spring of joy, which shall send forth living waters forever.

WHAT TO REQUIRE OF HIM WHO IS TO BE YOUR HUSBAND.—You have aimed at perfection, and probably fallen short of your mark. But I trust you have reached that degree of excellence which makes you womanly and yet not an angel. What then should you require of your lover? Of what manner of man should he be? What should he not be? In answer to these questions, a few hints may be given to serve as a basis from which a young lady may study her friend's character in connection with her own future weal.

You should require your lover to be a man of good and pure habits. The happiness of your whole life may depend on your steadfast decision here. For example, he should be temperate in every particular: as a man may be intemperate in more ways than one—in sleeping, in eating, drinking, the manner in which he spends his time, etc.; any of which are capable of duly bringing on misery. The sequences of intemperate eating are various forms of disease, as dyspepsia. And dyspepsia may be accompanied by gloomy imaginings, depression of spirits, indisposition to activity. Therefore a young lady should take thought of this form of intemperance, lest her husband be a sickly or a hypochondriacal man.

Among all the habits and the vices to which men are addicted, the habit of intemperance in the drinking of alcoholic liquors is the most of all to be dreaded. It brutalizes man. Directly, it is his own most insidious enemy, transforming him into a diseased, insane anomaly; indirectly, it is most terrible to woman, and changes home into pandemonium.

It often happens during courtship that the lady protests against this miserable habit in her lover, and he faithfully promises to "break off." Now the question is, is it wise for the lady to marry him on the strength of the promise? And the question

is not an easy one to correctly answer. It is surely safe *not* to marry him; but this habit is, it may be, the only objection to the marriage, and were she *sure* that the objection would be permanently removed, she would *wish* to marry him. The permanency of the removal is the point which she cannot positively know. If the young man is really and in every manner truthful, and truthful from a fixed moral principle; if his character as to perseverance in everything he undertakes is firm as the solid rock, then there is some assurance that his promise possesses worth. Reverse his character in those respects, and there is none; and especially none since a confirmed habit of intemperance so stubbornly persists in the constitution of man that it often assumes the form of an unremovable disease, to be kept in abeyance only by a man of strong, indomitable will. Suppose the lover is only a moderate or an occasional drinker—*then* is there safety in marrying him? Many such men are so organized that they will never become drunkards; and *all* such men believe, and will tell you they *know*, they never shall become intemperate; while the fact is most of them prove to be false prophets in regard to it. If the young lady knows of any rule by which she may correctly decide whether a young man of this class will or will not become a drunkard, she is safe; but I do not know of any such rule. There *is*, however, a rule or law in the nature of man by which there is a persistent tendency to increase this habit with a moderate drinker, but no rule by which the habit decreases but forever to let it alone. Therefore you will see that safety is not to marry an occasional or moderate drinker. And the girl who acts not in accordance with this self-evident truth, may bring to herself the most bitter regret, and she *may* have nothing better than regrets to quiet her sobbing breast or her bleeding heart.

During wooing, the active and reactive charms of magnetic love may so bedazzle your vision and understanding as to make you oblivious of the danger. You can, perhaps, only discern the exquisite picturings of a bright future, in a home of peaceful tranquillity and substantial bliss. Dear girl, if in your courtship with such a man, you have unfortunately arrived at this

point—pause. Look on the homes of drunkards, whom their wives married when they *were* drunkards, or only occasional or moderate drinkers. *Then* they were as gallant beaux and as gentlemanly as your own dear lover. The romance of love almost imperceptibly wore away as life went on, while all the way along the cursed serpent's resistless and venomous fangs were sinking deeper and deeper into the souls and lives of their husbands and once noble young men—now, alas! drunken sots, none so poor as to do them reverence. These are ghastly wounds, but scarcely more ghastly than those inflicted on their disconsolate, weeping, dying wives, and those which strike as keen, silent arrows the poor perishing children. Behold, such are the fairy homes which those lovely girls had pictured as their coming earthly paradise; *now* a paradise in ruins.

No two should enter into the relation of husband and wife unless their souls are imbued—baptized in the purest, mutual affection. Without it, neither money, nor position, nor convenience, nor the *name* of being *married*, "nor any other creature" can bind their hearts into an harmonious unity, and make them long happy. Mutual love is important, but it is not the only thing to be considered by a lady, and to actuate her in her choice of a husband, as already has been seen.

There goes a man dressed in broadcloth of the finest texture. He strides the ground as if he were the master and owner of it. His every motion cuts a pompous figure. He fizzes and froths like a bottle of ale just uncorked. One word in every six is *I*. He owes his tailor for his suit. He owns not a foot of land, nor anything else, and never will. Is unrespected by respectable people. Even the menial fly alights without a blush on his intrusive nose! My fair girl, do you want to marry him?

There comes another, whose eyes are turned towards the earth as if he were in a profound study. He meets one *so* kindly, and converses *so* complacently, so fluently, and so *smoothly*. He may, perhaps, be a professional gentleman, and says a great deal of how *little* others of the same profession know, and expatiates most learnedly of his own tremendous knowledge; all of which make you feel that if you were he,

and if he were what he thinks he is and pretends to be, then you could shake the heavens and dispute with fate itself. Do you want to marry that man? Do not marry a mean man and an egotist; better buy him for what he is really worth, and then sell him for what *he* thinks he is worth; or else do with him as the Paddy did with his pig. He cornered the pig in the parlor, and the little porker jumped through a seven-by-nine-inch window-pane. "Well," said the Paddy, watching the fast receding form of the diminutive swine, "I've got your dimensions, onyhow."

A woman who is amiable, pure, and true cannot be a happy wife of a man who possesses an insatiable greed for gold; whose burden of thought and talk is so much of stocks and dividends as to preclude all courtesy and demonstration of high affection towards his wife: for in her nature there is that innate quality, beautiful and holy, which causes her to feel that she *must* give and receive kind attentions, sympathy, and love.

While a girl should not marry a man merely because he is rich, she *should* see to it that she encourage only a lover who possesses physical, intellectual and moral soundness, and one who is master of some legitimate trade, business or profession, and has good business habits, moved by sound sense, energy and character. Such a man will not starve his family. He is made of the stuff which makes *men*. His financial success will at least be as certain as that of a young man who has inherited wealth. The opposite of such a man may be included in two classes, from either of which it is not well to choose a husband. The young men of one class are educated, more or less intelligent and passively good. Those of the other class are shallow, or sharp; bad, dark, infernal. In one particular, and a very important one, they all agree and are alike—they have no inclination for any useful activity, but a very large "capacity" to do nothing, or that which they have no business whatever to do. Totally wanting in the requisite perseverance, spirit and force of character to push them on in useful business, they are always waiting—waiting and waiting for "something to turn up." No woman who amounts to anything wants such a man for a hus-

band. Even if he is kind and affectionate to her, she cannot be happy under the ban of interminable, pinching poverty. She cannot live very well on great expectations, and the airy romance of love alone. When Pope sang:

> "Man wants but little here below
> Nor wants that little long,"

he surely could not have had in consideration all the wants of man. For he not only wants, but *needs* food, and raiment, and houses, and lands, and merchandise, and health, and mental culture and a thousand things more; and wants them as *long* as he shall live on earth.

Perhaps you remember having heard of the man who, after taking too much drink, went to saddle his horse, and got the saddle on wrong end before. When about to mount, a friend called his attention to the mistake. After gazing for a moment as if in deep thought, he said: "You let that saddle alone. How do you know which way I'm going?" Thus alcoholic liquors will turn the heads of men: but, alas! the heads of many are turned who are not addicted to the intemperate indulgence of the convivial glass. If your dear Wildwood is poor, and yet dresses very genteelly and richly, and is lavish in the spending of money, even if he *does* pay his tailor and all his debts promptly (which he probably does not), he is at least a man who has commenced life at the top of the ladder, and will be very likely to tumble off, and down to the bottom. He has the saddle on wrong end first.

There are many other ways by which one may get the saddle on wrong end foremost, some of which have been mentioned. If your father and mother tell you that such is the fact with Mr. Wildwood, listen with reason, and with reason act and answer them. "Oh! but, father, Mr. Wildwood is so much of a gentleman, so social, and so nice." "All very good," says the father, "as far as they go; but he has got the saddle on wrong end first." Now, my dear girl, if this is so, and you will not see it, time will disclose some very prosaic facts, which will dispel your brightest poetical illusions, when a thousand eternal echoes shall jeer at you—"so much of a gentleman—social—nice"

A Louisville girl is said to have disposed of an admirer who asked her, "Can you marry me?" thus: "You asked me pointedly, if I could marry you, and I have answered you pointedly, that I can. I can marry a man who makes love to a different girl every month. I can marry a man whose main occupation seems to be to join the gauntlet in front of churches and theatres, and comment audibly on the people who are compelled to pass through it. I can marry a man whose only means of support is an aged father. I can marry a man who boasts that any girl can be won with the help of a good tailor and an expert tongue. I can marry such a man, but I *w-o-n-t.*" Comment is unnecessary.

A young lady should see that the tastes, the disposition, the temperaments, and the currents of thought of her lover harmonize with her own. In ascertaining this, she needs to observe and to think closely and impartially, for blinding love may suppress her reason, while Cupid leads her enchantingly on. (See How to Choose a Wife.)

Having prepared yourself for woman's highest life, having weighed the character of your lover in the scales of discrimination, reason and justice, if you have found him not wanting, if you have found him your affinity, then love him, after he loves you, with all your woman's soul; marry and be to him his constant joy, and great shall be the reward of victorious affection.

PHYSIOLOGY AND HYGIENE OF MARRIAGE.

I am not unaware that this subject must face those who assume, either from timidity or false modesty, that nothing should be written or spoken as to these things; but I also know full well that a great proportion of the people of both sexes are in total darkness concerning the physiology and hygiene of marriage, and that largely on account of the ignorance, we must *search* if we would find a perfectly healthy married woman. Therefore not only delicacy but plainness of speech is obviously demanded.

The truth cannot too well be impressed on the mind of the man about to be married, that intense excitement, with an unreasonable impetuosity on his part, so often practiced during

the consummation of marriage, frequently causes acute inflammation of the external or internal genital organs of the woman, and that if the first act be oft repeated, the acute is very liable to be passed along into a chronic inflammation, which it will take many months of diligent treatment to cure, and if she is not brought under treatment, then many years will her constitution suffer for the ignorant rashness of her husband.

If the wife is a virgin, the consummation of marriage will generally and naturally be attended by a small effusion of blood, and more or less pain; but if the husband is very gentle and unwilling to give pain to the one he loves, those symptoms will not be severe and will soon pass away, unless there exists great disproportion of size between the two, and the wife will be better prepared for future enjoyment. The disproportionate contingency referred to deserves attention of the marriageable of both sexes, in that a small woman, especially if narrow across the hips, should not as a rule marry a large man.

A word is pertinent here in regard to virginity in a moral aspect. It is the prevailing opinion among the people that the consummation of marriage should *always* be characterized by an effusion of blood from the necessary rupture of the hymen, and if not thus characterized, that it is certain evidence of previous unchastity, and husbands deem it a just cause for conjugal infelicity or divorce. Now every one ought to know that the hymen is sometimes destroyed by mechanical accident or by accidental disease which has nothing at all to do with illicit love; that sometimes a leucorrhœa will relax the external genitals, and that in either case the consummation of marriage causes no effusion of blood, and in the latter case no rupture, perhaps, of the hymen. Therefore a young man should have further evidence than apparent previous rupture of the hymen, before accusing his wife of previous unchastity.

Nor on the other hand is the presence of the hymen always a certain evidence of virginity, for it has been found entire after the occurrence of pregnancy. Consequently while it is a rule that a virgin's hymen is entire, and that the absence of it denotes that she is not a virgin, there are many exceptions to the rule.

Physiologists are generally agreed that the following are well-established facts: 1st. That sexual intercourse should never be indulged in only when there is a natural and an ardent desire on the part of both husband and wife. A disinclination is sufficient evidence that it is inconsistent with the present wants of nature, and therefore hurtful to the disinclined person. Besides from the fact that it is opposed to the natural wants at the time as to the lady, the vagina if healthy is deficient in the moisture which is natural under desire; hence it is obvious that indulgence will be detrimental to the health of the lady, causing disease.

2d. Both husband and wife should be in fair good health, because the exercise of this function is depressing to persons at their best; and therefore if enfeebled by ill health the debilitating effects are not well recovered from.

3d. It ought to be abstained from when it produces depression of spirits or corporeal pain, nervousness or debility. The reason is self-evident.

4th. If intercourse be repeated within a few hours it is generally unprolific, because the second intercourse interferes with the natural physiological action of the first in the function of conception, and because the semen in the second is not adapted to perform its part in the generative process.

5th. A woman should not become pregnant when either she or her husband is physically or mentally exhausted, intoxicated, insane, or sexually diseased; because the vitality and intellect of the child partakes more or less of the condition of the parents at the time of conception.

6th. Therefore in the morning, when both have rested from the fatigues of the preceding day, is the most appropriate time for procreation. But since the act is somewhat exhaustive of vitality, it should be followed by a short repose.

7th. Intercourse should be entirely abstained from during the menstrual and child-bed flow, and very infrequently indulged in during pregnancy: because nature, under the first two conditions, has evidently put her injunction on such an act in the most visible manner. During pregnancy nature speaks to man

through the custom of animals. Yet occasional careful intercourse during this period, probably, is not especially objectionable; but frequent pleasure may end in abortion or very serious disease, or both.

8th. The frequency with which this pleasure may be indulged must be left to the judgment of every man and woman, and their judgment must be based alone on the effects the indulgence produces upon either of them; and not at all on an insatiable animal propensity. Regulated by this rule, it will be found that once a week may be harmlessly borne by some, and very harmfully by others.

9th. An interference with the natural process, which is so fashionable with those who are disinclined to have children, is detrimental to health somewhat in proportion to the quality of the interference and the vitality of the person. You may depend upon it that all intermeddling is injurious to health. Nature has made no provision whatever for those degrading practices so often, I might say universally, resorted to: as that of rejecting the husband until ten days have elapsed after the menstrual period, when in most women there is little danger of conception, and little sexual desire, and then to make safety doubly sure, douse the engorged vagina and uterus with cold water. But it is needless to name the expedients resorted to for the purpose of thwarting the course of sexual nature; they are too well known already, and all subject the sexual organs to an unpardonable abuse.

A Hint to Parents.—Many parents are, perhaps, ignorant of the fact (others not ignorant might as well be, so far as any practical use of their knowledge is concerned) that among young people the habit of artificial excitation, or self-abuse, prevails to a large extent, and is often practiced so excessively as to enfeeble both mind and body and prove a prolific mother of many diseases. Parents have no right to make the negligent attempt to evade their responsibilities in this regard. Nor does their responsibility begin *after* the unfortunate habit is formed, when the reform is among the improbabilities. It *does* commence as soon as the child is intelligent enough to understand the in-

struction and the warning that it is the parents' imperative duty most impressively to give.

This subject is one from which I would gladly turn away, but how can I, in view of the great prevalence of this degrading habit among boys, and from which some girls are not free? How can I be silent in the presence of parents, whom I have admonished to save their children from this low self-contamination? How can parents guard and save their sons from this vice unless they are made acquainted with the chief causes which lead down to it?

1. The cause may sometimes be dated back to infancy, for infants not unfrequently contract the habit of handling those parts, not of course from any sexual desire, but on account of irritation which is reflected from disorder of some other mucous membrane, as that of the mouth in teething, of the bowels in diarrhœa, constipation, or worms, etc. A habit thus formed may continue to puberty or manhood, and, when excessive, produce grave physical and mental evils.

2. The habit more often comes from the influence of example —from association with those who are in this way depraved.

Such are the two chief causes that lead to a habit which may produce various ills of the body and deplorable disasters of the mind. Without active, practical vigilance on their own part, can parents for a moment suppose that their children are safe? Knowing the causes, the prevention is obvious, but not always easy.

In regard to this subject the distinguished Dr. Flint, in one of his works, among other good advice, says: "The effects on mind as well as body are pernicious. It is plainly the duty of the physician not only to endeavor to discover and arrest this practice in individual cases, but to enjoin upon parents, teachers, and associates, the importance of watchfulness in this respect over those for whose welfare they are to a greater or less extent responsible."

It is not enough that parents know the causes and undertake to prevent them, for in spite of their best-directed efforts this fault will sometimes be contracted. They must, therefore, know

how to detect the habit formed and carried to the degree which produces evil results, the cause of which, if known, the young are naturally disinclined to divulge. Face habitually pale or unnaturally flushed, with an aspect of shame, eyes red, with a downcast expression, and which turn from your steady gaze. These are enough to elicit parental attention and close scrutiny. If added to such symptoms, the physical or mental health suffers obscurely as to cause, the suspicion issues into a near certainty. The amount of corporeal or mental derangement may be slight or grave—frontal headache, sleepless nights, or uneasy sleep attended by lascivious dreams, nervous debility, which sometimes amounts to extreme unrest and prostration, with the most dismal forebodings of the mind.

Treatment.—The habit must, of course, be abstained from at once and for all time. Avoid exciting causes, banish impure thoughts, books, newspaper reports of outrages, etc. Have the clothing, both of bed and person, light and free from friction. Tincture digitalis, two drachms; tincture camphor, two drachms; mix. Dose fifteen to twenty drops after meals in simple syrup.

If prostration is great, as is indicated by debility of the general system, or trembling of the hands and inactivity or weakness of the mental faculties, then instead of the digitalis and camphor the following will be better: Homœopathic tincture of phosphorus, thirty drops; same kind of tincture of nux vomica, thirty drops; alcohol, eight drachms; mix. Dose, ten drops in a little water after meals. Shake vial before using.

If indigestion is present, fifteen grains of saccharated pepsine should be taken at the same time.

If the patient is sleepless at night, or if sleep is much disturbed by unwanted dreams, let the following be taken: bromide potassium, five drachms; tincture valerian, two fluid ounces; water, two fluid ounces; mix. Dose, one to two teaspoonfuls in a little water every hour until sleep is procured.

There must be maintained a regular life, temperate habits, plain, unstimulating but nourishing food, out-door air, with plenty of exercise. These means will probably be successful in a perfect restoration. If not, the family physician should be

consulted; not advertising doctors, who for mercenary ends greatly exaggerate, to the harm of the patient, the evils which are indeed sufficiently bad, but if taken in time are generally curable.

CONJUGAL RIGHTS AND OBLIGATIONS.

Polygamy is sanctioned by the laws of some Eastern nations, and at one time was practised by the Mormons in our own country. I do not intend to discuss the merits or demerits of polygamy, and all know it has demerits enough. It is enough to say that it was not peacefully tolerated in enlightened America and remained a bone of contention until legislated out of existence.

It is not necessary in this age of civilization and reason to waste words in the way of proving that monogamy is greatly superior and to be preferred to any other form of marriage. Nor is it necessary to prove that the species of concubinage, and that which is far worse than legalized concubinage, of which so many are guilty, are a disgrace to our civilization. The numerous matrimonial infelicities, the bitter jealousies everywhere, the disgusting diseases which not only inflict the lewdly incontinent, but their children and children's children, are sufficient evidence, one should think, to convince the most dissolute that the sexual relation ought to exist between man and his wife and they alone.

The chief objects of marriage are procreation, and a proper physical, intellectual, and moral education of children, and the mutual society, aid, and comfort of the married. Therefore the married have no right to thwart those objects in any manner whatever. But, to their dishonor, many do thwart the procreation of children both before and after conception. Their happiness and the mutual benefits of each other's society are banished by the display of bad temper, the practice of sexual infidelity, and many other ways, and dearly they pay for their follies.

The wife should not be accustomed to refuse the approaches of her husband, unless there be a reasonable cause for such refusal. But there is cause for refusal if the husband is intoxicated, or if he has venereal disease, or if he is so insatiably amorous that the desired frequency of its gratification is hurtful to one or

both, or if the wife has her menses or lochial discharge present, or if she is so deformed as to be incapable of bearing a child, or if she has some disease which intercourse would aggravate. Frequent refusal without adequate reason will drive her husband to incontinency, or at least to quarrels and hatred. The husband, however, should not on his part have the habit of requesting and persisting when his wife has no desire, or is cold as the mercury at zero, unless that is her *usual* temperature; if such be the case, she had no right to become a wife, unless to a man who is himself chronically frozen, and platonic love can be their mutual desire.

HEREDITY.

This subject is so vast, that it cannot, in a work of this kind, be fully encompassed, or receive even a systematic treatment. It is too important, however, to be altogether excluded. A few hints will therefore be given, which will be interesting or useful to those who have given little attention to these things.

Stock-raisers study the means by which their horses, cattle, hogs, and even poultry may be improved; but stock-raisers and everybody else marry, and never before nor afterwards take a single thought of what manner of progeny they are to bring forth. If their children are healthy and intellectual, they thank their stars; if they are feeble or idiotic, they calmly ascribe the misfortune to a great Providence, that passeth understanding. We ourselves are responsible for many blunders with which we so easily charge the Creator, and it belongs to us to know it, and depend on ourselves for the cure.

Bad and good traits of character, resemblance of manners, strong and weak constitution, similitude of body, aspect of the face, etc., are inherited. 1st, by direct heredity, in which the child physically and mentally resembles one or both parents; 2d, by what may be called remote heredity, or when the child resembles one or both of the grandparents, or some other relative more or less remote; 3d, by prenatal heredity, in which an intense and persistent emotion, temper, or impression of the mother, before the birth of the child, influences it fortunately or unfortunately, with regard to the conformation of the body or

peculiar tendencies of the mind. The 1st and 3d of these classes are of peculiar practical value, if studied, and the consequent deductions practiced.

1st. While children sometimes resemble their grandparents, or some other more or less remote ancestors, they are far more likely to resemble their parents, not only in external form and color, but also to inherit the internal physical and mental peculiarities; hence, the tendencies to health or disease, longevity or the want of it, and mental characteristics of their parents.

Not only is a tendency to general disease inherited, but to special disease as well, as consumption, scrofula, cancer, etc., and that most loathsome and nameless of all loathsome diseases. It is a humiliating shame that such a disease as the latter should exist among the human race, and especially so, that it should exist among otherwise respectable men and women. The fact that thousands are contaminated, that its merciless ravages not only extend to those who sin, but indirectly to their children, and children's children, by hereditary descent, all afford sufficient apology for introducing a few comments concerning it in these pages.

If the constitution of a father or mother, and especially of the mother, is infected with the poison of this disease, the children will probably inherit the same. An inheritance indeed! Thus I have seen children born, only soon to die by this goading corruption, implanted so cruelly within them. Others live, but at a miserable, dying rate. Those who believe that such cases are rare, or rare except among the lower and degraded classes, are very much mistaken, as every physician can testify. People would have occasion to be astonished and alarmed were they to be introduced into the dark closets of the inner lives of all who have sinned, the cursed fruits of which corrupt forever more. Yet men and women will not shun temptation, will not practice continence, nor cultivate pure sentiments, nor live chaste lives above reproach, but will morally sleep on, to be awakened by and by in torment.

As children inherit more or less of the unsoundness of body and mind of one or both parents, so are sound qualities equally

inherited. Consequently, husbands and wives should be in good mental and physical health when they place themselves under hereditary laws with relation to their future children, for the laws of heredity are inexorable. To the worthy, they are also grand and beneficent, inviting man and woman to consummate marriage, and thus write a proclamation of reform of health of body and nobility of soul to their sons and daughters who are to be.

3d. PRENATAL HEREDITY.—It is then a law of procreation that the physical and moral qualities of parents, in a great degree, are transmitted to their children by heredity; that a healthy, intelligent, moral man and woman, at ages suitable for each other, united in marriage by the strong bands of undying affection, other things being favorable, may expect children as perfect as their parentage, in physical, intellectual, and moral constitution. That, on the other hand, unhealthy parents, without intelligence or goodness, united in wedlock without sympathy of age, without love for each other, need not, in the natural course of things, expect their children to be better corporeally or mentally than themselves. The important question arises: is it possible for a married pair to rise above themselves and produce children superior to their parentage?

For the feeble-bodied to produce feeble children; for the weak-minded to generate weak-minded offspring; and, *vice versa*, for like to produce like, may be said to be the general course of nature. Yet the conditions under which conception takes place, as well as the conditions afterward, seem very often and greatly to vary the physical and mental constitution of the child—to raise it above, or sink it below its parentage. It was the opinion of Aristotle, as it is the opinion of many modern physiologists, that the chief reason for so frequent delicate and feeble-minded children when parentage would seem to warrant otherwise, consists in this: that our species so often perform the generative act when both mind and body are more or less wearied, or negligently, and while their minds are filled by other thoughts. Thus it is found that great men and intense and profound thinkers seldom produce their duplicate. It is rea-

sonable to conclude that they essentially are wearied, and mentally more or less absorbed on other themes during the procreative act. The men who move the world come from the lowly, whose minds can be absorbed, at the proper time, in the fruitions of love. Therefore in the act of procreation both husband and wife should, at the moment, be in sound health, free from physical or mental weariness, and mentally absorbed in the embrace.

I would not, however, have any reader suppose that all shallow couples may produce sages at will, nor that no couples of profound thought can produce wise men. The following fact may, in part, account for the failure of illustrious men to produce illustrious sons: it seems to be a kind of hereditary law, though attended by many exceptions, that the father transmits the form of the head, chest, and superior extremities to the daughters; that the mother transmits the lower part of the body and the inferior extremities; while the sons inherit the form of the head and upper parts of the body from the mother, and lower parts from the father. Hence the saying that celebrated women have celebrated sons, and celebrated fathers.

Again, it is the opinion of many physiologists and naturalists, and of Dr. Darwin among the rest, that the fœtus (child) may, during *gestation*, undergo peculiar and radical modifications, from strong, persistent impressions made on the mind of the mother. This opinion seems to have arisen and been substantiated from repeated experience of facts.

Dr. A. Combe teaches as follows on this point: "We have demonstrative evidence that a fit of passion in a nurse vitiates the quality of the milk to such a degree as to cause colic and indigestion (or even death) in the suckling infant. If, in a child already born, and so far independent of its parent, the relation between the two is thus strong, is it unreasonable to suppose that it should yet be stronger, when the infant lies in its mother's womb, is nourished indirectly by its mother's blood, and is to all intents and purposes a part of her own body? If a sudden and powerful emotion of her own mind exerts such an influence upon her stomach as to excite immediate vomiting, and upon her heart as almost to arrest its motion and induce

fainting, can we believe that it will have no effect on her womb and the fragile being contained within it? Facts and reason, then, alike demonstrate the reality of the influence; and much practical advantage would result to both parent and child, were the conditions and extent of its operations better understood."

The celebrated Esquirol corroborates the same opinion when he says that those children who were born amid the fearful and vengeful scenes of the French revolution were extremely nervous, irritable, and subject to terrible excitement and often to insanity.

And again, according to Sir Walter Scott, the mother of Napoleon Bonaparte accompanied her husband in the perils of war with undaunted bravery, while she was *enceinte* with the future Emperor: his intrepidity and terrible activity are historical wonders.

Just before the birth of James the First of England his mother Queen Mary is said to have witnessed the murder of David Rizzio, which shook her with unutterable fear. It is a fact of history, that James the First was, all through his life, subject to convulsions of fear; yet Queen Mary and all the Stuarts were noted for their bravery.

The following striking examples are from a lecture by Joseph Cook, and originally from the work of Mrs. G. B. Kirby, on "Transmission, or Variation of Character."

"An Irish mother had a malicious child and a kind child. Being asked if she could account for the difference of disposition between the two, she said the good God gave them both to her, and she knew nothing of the cause, 'Only this little Kate will strike her knife in the shoulder of my little Mary. How should I know the source of Kate's disposition? Look into her brown eyes. There is a leer of malice in them.' The mother was then asked, 'Were you happy in the summer and winter and spring before Kate's first summer?' 'Happy, is it you say, sir? An' shure, when me husband was tuk up wid another woman, how could I be happy? It's me as was but a few months married, an' in a strange counthrie; an' he a-riding with her in a chaise, it is. Faith, me heart was broken, it was;

an' I hated that woman so, I was longing all the time to lay my hands on her. I'd liked to have murdered the old fiend.' 'And was he still behaving so badly in the summer before Mary's first summer?' she was asked. 'The saints be praised, no. The woman moved away. Bad success to her! An' Patrick gave up his bad ways afther, an' trated me rale well. too.'"

"In a coarse, common-place family there was a daughter, about nineteen years old, who was so evidently and remarkably superior, both in personal appearance and nature, that it did not seem possible she could belong to the same family. There was no explanation of her differing from her brothers and sisters, and I thought the mystery was one impossible to solve. Conversing with her mother, she said: 'There was a book I must tell you about—a book that lifted me right out of myself; 'twas the sweetest little thing you ever saw, and on the first page it said, "The Lady of the Lake." I *did* want that book. And I had a couple of dollars in a stocking-foot on the chimney shelf. But a dollar was a big thing then, and I did not feel as if I ought to indulge myself. So I said no, and saw the peddler pack up his things and travel. Then I could think of nothing but that book the rest of the day, I wanted it so, and at night could not sleep for thinking of it. At last I got up, and, without making a bit of noise, dressed myself, and walked four miles to a village, where the peddler told me he should stay that night, at the Browns'; friends of ours, they were. And I got him up, and bought the book, and brought it back with me. I looked it over and through, and put it under my pillow. Next day I began to read the beautiful story. And perhaps you would not believe it, but, before Nelly arrived in the world, if you would but give me a word here and there, I could begin at the beginning and say it through to the end. *It appeared to me I was there with those people, by the lakes in the mountains, with Allan Bane and his harp, Ellen Douglass, Malcolm Graeme, Fitz James, and the others.* I saw Ellen's picture before me when I was milking the cow, or cooking on the hearth, or weeding in the garden. There she was, stepping about so sweetly in the rhyme, that I felt to be all true as day—more true after I could repeat it to

myself. And then, when I found the baby grew into such a pretty girl, and so sweet, too, it seemed as if Providence had been ever so good to me again. But children are mysterious anyway. I have wondered a thousand times why Nelly was such a lady, and why she loved to learn so much more than the other children.'"

It hence appears that mental as well as corporeal states of the mother do, while the child's life is so intimately connected with her own, influence the little being, yet unborn, for good or for evil. And the lesson to be drawn from this fact is too important to be left unlearned or unpracticed.

PROCREATING THE SEXES AT WILL.—The possibility of this is a disputed point among observers. But since the rules by which it is said it may be accomplished are harmless to practice, and the accomplishment of it of great interest to many, a brief glance at a few opinions advocated may be of interest to some.

M. Venette gives us the following rules by which either sex may be procreated at will. 1. Persons should not have children until the bodies of both husband and wife are fully developed. 2. They should use nourishing food. 3. They should avoid all excesses at table. 4. To obtain male infants sexual intercourse must not be indulged in only occasionally. 5. Girls more often follow frequent enjoyment. 6. Women who menstruate moderately should not submit themselves to sexual pleasure until after the end of each period; those who menstruate too frequently or profusely, should not receive the embrace of the husband except a short time before or after the menses. 7. Girls are more frequently begotten in excessively hot weather.

Another author teaches that either sex may be produced at will by the woman assuming a certain position during the act of reproduction or sexual pleasure. Thus, if a boy is wanted, she should be inclined to the right side; and to left side for a girl. In his own language, he says: "Si inclinetur leviter mulier in coitu in latus dextrum generat mas; in sinistrum fœmina." And he cites several cases in which he says these rules were effectual.

HOW TO HAVE BEAUTIFUL CHILDREN.—After taking into view

the great influence which the mind of the mother may exert upon her unborn offspring, it does not seem by any means chimerical to suppose that the mother's moods may have something to do as to the ugliness or beauty of her children. Beautiful parents very naturally expect their children to be pretty; but there are parents in the world who cannot lay decided claim to good looks, and yet would have their sons and daughters good looking.

It is said that the statues of Venus, Apollo, etc., standing in the public places of Greece, reproduced their aspects in the children of pregnant mothers who looked upon and trusted in those statues for the result. And we might reasonably suppose that the faith of those mothers was not altogether in vain, and especially not with the following adjuncts: 1. Marriage should only be contracted at appropriate ages, and without disproportion between the age of the husband and wife. 2. A crossing of temperaments and of nationalities is desirable. 3. Conception should not take place when either the husband or wife is too young or too old. 4. Both should be in perfect health when it does take place. 5. Neither should be intoxicated. 6. The desire should be intense and mutual. 7. The mother should, during her pregnancy, avoid ugly or frightful sights, and ungentle thoughts. 8. She should, during the same time, contemplate much and with deep interest the beautiful in nature and in art. 9. Let her be a graceful lady in every sense, and uniformly happy. Following these rules, and such as these, ladies will not only improve beauty in their children, but also disposition, health, intellect.

PRACTICAL HINTS.—Therefore, as man can by careful selection and breeding of animals perpetuate a certain species, not only in blood, but also in color, markings, health, vigor, size, etc., as he can after a few generations produce new varieties of animals, so may the laws of heredity as applied to the human race do effective service. But let the fact be most thoroughly impressed on our minds and practiced to the advantage of our children yet to be, that undesirable characteristics may be inherited as readily as the desirable. Thus, if the husband or wife

becomes a drunkard, some of their children will very likely become so. If either is intoxicated during the procreative act the chances are that the child will some time during life suffer from some physical or mental derangement, or pronounced imbecility or insanity. If a robust man contracts vicious habits and then becomes a father of children, the children will probably suffer the consequences in some way. If from special unsanitary conduct or mode of living, one of the parents becomes consumptive without a previous natural or inherited predisposition, subsequent children are likely to be more inclined to the disease on the strength of parental error. If from any cause the nervous system of either parent becomes seriously deranged, the harvest will probably be reaped by the child who is to come. If parents become immoral and criminal, "the sins of the fathers shall be visited upon the children, even unto the third and fourth generation."

Now, whatever the causes by which children have inherited disease, it is the great question, how can that hereditary tendency be stamped out so as not to run through coming generations? The first idea to be remembered in such a hygienic contest is that hereditary diseases are not often developed without an exciting cause. Thus a young man predisposed by inheritance to consumption often may by careful sanitary management keep the disease most obscurely latent and passive; but he has only to be a little thoughtless, as going into a well or sleeping for a single night in a damp place, to awaken the sleeping vulture that shall gnaw his life away. *The object, then, in all passive hereditary diseases*, is to *prevent the exciting causes which arouse them.* To accomplish this object the reader is referred to the subject: "Causes and Prevention of Disease."

MARRIAGE BETWEEN RELATIVES.—Though any hereditary characteristics and tendency to disease may leap a generation and appear in the next, the direct law of inheritance is the rule; and when both husband and wife suffer from the same disease, the rule is precise, and so inexorable, and the tendency to the disease so intensified in the children, that it is hard or impossible to evade it, as if nature was determined upon the extinction

of the unfit. Now, since the same hereditary diseases are apt to afflict relatives, it is self-evident that marriage between cousins, or others of close consanguinity, is not advisable, unless there is perfect assurance of good health on both sides. Such intermarriages, and especially if repeated and again repeated, will lead to imbecility, insanity, general degeneracy, and finally to extinction. The truth of this is fairly proved in the experience of certain aristocracies. Thus, such degeneracy is found among the noble and royal families of Portugal and Spain, who marry nieces and other near relatives, and many of whose children are weak in mind and body or idiotic.

"The awful consequence of marriage within the limits of close consanguinity are pretty well demonstrated in the lives of a family of eight people—father, mother and six children—whose home is in Le Claire township, Scott county. Yet even the parents themselves are not to blame for it, as will be observed on reading the history of the family:

It appears that the father and mother were born of the same parents, and when small children were adopted by kind people when without homes, and the girl's foster-parents removed to the West, each bearing the name of his or her foster-father, and each utterly ignorant of any relationship, for neither remembered the new name of the other. So there was courtship and marriage—and not until seven children had been born unto them did the couple discover that they were brother and sister. How the discovery was made is not known, but it is believed an aunt of the unfortunate wife, who visited them, told them of it. But not one of the children escaped a physical affliction or infirmity. One of the children is deaf and dumb, another deaf, another blind, another deformed, and one half-witted, while another is insane. One died when a child. After the discovery the wife was but a housekeeper for the family, and soon became an invalid—poor, bedridden being, until death relieved her of her unhappy existence."

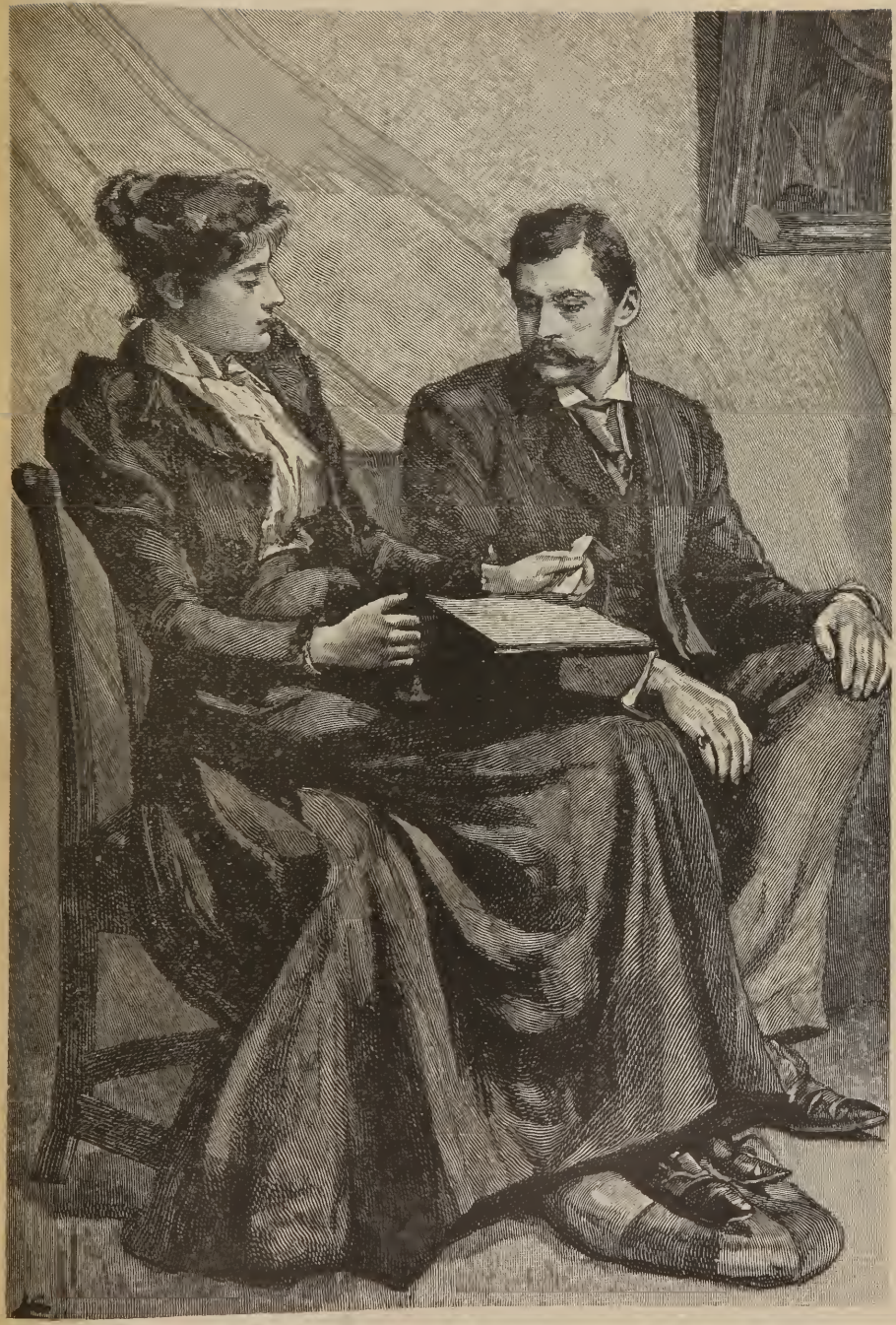
What though "Man is a god in ruins," he may arise from the ashes so new and radiant as to make himself by a slow but sure progression godlike without the ruins. Not by relatives mar-

rying relatives; not by consumptives marrying consumptives; nor the weakly wedding the weakly; nor the drunkards marrying drunkards; nor the dissolute the dissolute, and thus bequeathing the nameless and loathsome disease to their children, and so on all through the catalogue, but by the study and practice of hereditary laws and all that those laws include. "When men are innocent, life shall be longer and shall pass into the immortal as gently as we awake from dreams." When men are both innocent and wise, and when in relation to hereditary laws they practice their wisdom, life shall be still longer, healthier and grander. Let the mind of this generation be fastened upon its responsibilities of the present and future; let honesty, duty, progress be watchwords emblazoned on the advancing front of this age, and future generations shall rise up and call us blessed.

HEARTS AND HOMES—HUSBAND AND WIFE.

"'Mid pleasures and palaces, though we may roam,
Be it ever so humble, there's no place like home."

Having passed to the fair but indefinable meridian glory of love, conscious of the exquisite joy and grandeur of its conquering power and generous submission, the young man and woman are newly created husband and wife. Amid the glow of their radiant sky, supreme affection throbs to poetic pulses, the honey-dew the while distilling from loving lips, sympathetic hearts and tongues. The dear bride feels happy and strong and secure in the strength of the man who stands beside her. He seems to her a burnished shield inlaid with pure gold—how soon, alas! will the golden shield to her become brass! Ere the bridal May-day is passed shall the withering flame of ill-temper consume their dearest fruitions! In the near future, as face meets face and eye meets eye, shall the sweet glance of absorbing, endearing sympathy, that has so thrilled them, be displaced by a growl—by voices of unkind criticism, bitter invective, angry flings, disputes, unreasonable fault-finding! These are swift wings that bear away respect and affection and carry fugitive hopes still further on. Creators of irreparable regrets—graves of good resolves, of future joys, of lost possibilities, which at last are but a procession of ghosts in the home of dead love.



HUSBAND AND WIFE.

MISMATCHED.—Many couples find *after* marriage that they were not made for each other; that there is, perhaps, a union of May with November; that the wife is masculine, or the husband feminine; that they married from the force of sexual passions, or that their tastes and opinions differ beyond all reconciliation. What do they propose to do about it? Shall one be the ruler and the other the ruled? Shall the husband claim the prerogative of despotic kingship or the wife that of imperious queen? Or will both have forethought enough to induce them to learn forbearance and a disposition to forgive? It is well to make up their minds concerning their future course from the first before bitter dissensions, those tongues of fire, arise to scorch their cursed insignia upon their hearts and homes.

BEAR AND FORBEAR.—Before marriage both the lady and the gentleman may have been very careful about acquaintance, harmony of tastes, of dispositions, and of temperaments, which all go to form the bases of a happy married life; but even then in most cases they will find out, ere long, that they are, in many respects, entirely unacquainted. Therefore when the honeymoon shall have passed its fulness and grown old, asperities and unpleasant differences will be likely to arise where all was smooth before. This danger is so much the greater since each had supposed the other perfect, and now must discover their mutual mistake. Here I believe, as a rule, is the most dangerous time and point of married life. Will they be forewarned and prepared to meet and subdue the ripples on the troubled waters before they rise into dangerous breakers? Or will they go mad and sink forever in the turbulent ocean of domestic discord? If they would not live or if they would in the silvery sheen began when their wedded life began, they must bring to the rescue patient forbearance, their best judgment, and the magic strength of their love. Let these benign forces smooth down those asperities, reconcile their conflicting opinions, elevate their mutual feelings and actions into the grandest freedom, their two lives into a oneness of purpose, and their souls into harmony. *We will be happy together, we will sympathize in the sufferings of each other, and rejoice in*

each other's joys—let these resolves be written upon their hearts before regrets shall tell the tale of happier days.

The relation between husband and wife is that of *nearness:* and this very nearness of relationship is apt to breed contempt. Consequently the duties, responsibilities and behavior of each to the other should be studied and comprehended.

CONTENTIONS.—Every married pair would do well to make up their minds from the start never to quarrel, nor speak an angry word to each other. Many unfortunately are so sensitive and so impulsive as to make this a hard rule to obey. Yet all can do their best, and this will wonderfully cultivate mild dispositions, and personal control. In the meantime each to the other should make an appropriate acknowledgment, in word or action, for every unkind word which happens to escape from the lips. The victory is to those who desire it.

ATTENTIONS.—It is not enough that the husband and wife do not quarrel with each other; but that, in word and action, they express *amiability*. Affection cannot live without exercise, its only nutriment, any more than man can live without food. Long continued inactivity will starve to death the most fervid love that ever lived in the breast of man or woman. Yet some husbands repulse every attempted caress from their *own* wives, though they may not from the wives of other men. They seem to take the purest kiss as something indecorous, and their manner answers it: "Madam, I wish the next movement of your lips to be, 'I beg your pardon, sir.'" They *used* to think that kisses were made for *lovers*, but *now* that they are made only for children, and for those connected with their amours.

The woman who is amiable *must* love and be loved. If her husband is cold as an icicle, and repellent as a grizzly bear, what wonder is it, if, when she kisses or caresses him, and is so ungraciously rebuffed, she secretly, way down, deep and dark, in her heart, wishes, at least, that her kiss had been bestowed upon the lips of an appreciative man? If the frigidity be on the part of the wife, the husband being affectionate, what wonder if he is a little thrilled by the bright battery of some fair lady's eyes? In either case, there often comes from the soul of the one so

bereaved of that love which is dearer than life, the answering, agonizing cry, "*strayed, stolen* or *dead.*"

ECONOMY.—The measure of happiness will, in a greater or less degree, depend upon financial prosperity and integrity. Therefore if the young couple are poor, it is the part of wisdom to commence life at the bottom of the ladder, and live within their means. As children must creep before they can walk, so must families omit some style until they are able to assume it—do without some luxuries until able to have them. No man gathers strength by carrying loads which nearly break his back.

I have known many who because they were poor commenced housekeeping in old, dingy, log-houses. They lived within their means, practiced the strictest home economy, and afterwards were able to own mansions. I have known others who commenced in mansions, lived beyond their means, and ended in log-cabins, or "over the hill at the poor-house." An affectionate wife, who is pleasing in her address, is indeed a treasure to an appreciative husband. Still she needs many other characteristics, one of which is domestic economy. It has been said that a man must ask his wife's permission to become rich. The saying is obviously true, since however well a man may manage his business, if the household affairs are so conducted as to forbid the living within their means, the consequences are not hard to anticipate. It is very little encouragement for a man to be ever conscious that his wife has an imperative demand for all his income—that the size of the leak will be fully up with the supply. Such will not be the case if she practically feels that her interests are identical with his. "Silks and satins, scarlets and velvets put out the kitchen-fire." "Pride breakfasted with plenty, dined with poverty, and supped with infamy." "Extravagance and improvidence end at the prison door." "Creditors have better memories than debtors." Extravagance and improvidence may be regretted; but "it is foolish to lay out money in the purchase of repentance."

DILIGENCE.—An esteemed lady whose father is now wealthy, was asked at a large social party, "Is it really true that your mother used to take in washing?" To say nothing about the

propriety of such a question, on such an occasion, the answer was at least sensible, characteristic and noble. It was this: "Why, yes, but that was when we were poor." No honest business is menial for a poor man or woman to do—or for a rich man or woman either; but it is dishonest to refuse that which is necessary to bring us our bread and butter. The *willingness* to do and the *action* are often the simple secrets of success. "Diligence is the mother of good luck." "Sloth, like rust, consumes faster than labor wears. If you would have your business done, *go;* if not, *send.*"

Good Management.—A story is told of a happy wife who, when asked how she managed her husband so well, replied with an arch smile, "My dear, I feed him well." Did that lady, do you suppose, leave her household affairs entirely to her servants? Then she was not a lady, in the eyes of many people, and of many servants. Miss Bridget echoes well this sentiment when she says: "Me last mistress was a lady; she niver put the nose of her intil the kitchen door." If there are no other characteristics necessary to change a woman into a lady than "niver to go intil the kitchen door," it is an exceedingly easy matter for a lolling, rest-loving, above-work woman to be a lady. A few servants may unquestionably be found who are so nearly perfect in their culinary skill and sovereignty, that the mistress need not give much of her attention to the affairs of the kitchen, or of the house generally, but such servants are "like angels' visits, few and far between." The wheels of the kitchen, as run by the average servant, will grind up a great deal of cash in the shape of bread, butter, meat and sugar, unless the servant is under the immediate supervision of her who is supposed to have an intimate interest in the household finances.

Religion.—Do the young husband and wife belong to different churches? If so, what do they propose? Shall the husband attend his church, and the wife hers? Is this the kind of oneness that marriage has made of the twain? It is a separation which is very likely to breed contentions, and finally contempt. Why cannot both husband and wife attend one church,

and worship together their great loving God, the Father of us all, who loves not sects, but personal Christians? But shall the husband give up his church, or the wife hers? Which? The one whose character is most in harmony with the divine will. If they have a proper appreciation of each other and of duty, there will be no dispute about this question. But if they adore self and "Our Church," more than either, there *will* be dispute irreconcilable and divisible. The latter being the case, they should have lived forever alone, and glorified their best lover.

UNITY.—In all that relates to home-life the husband and wife should understand and feel that they two are as one. They indeed have separate duties, but cannot *really* have separate *interests.* These are self-evident facts, and yet when we are introduced to the inner-life of some families, they seem more like self-evident falsehoods. Each member is devoted solely to his own or her own interests and pleasures, without regard to the claims of the others. The husband expects his wife, by virtue of her position, to be ever cheerful, and to extend to him all the little courtesies which go to make his life very happy. The wife expects the same from the husband; while neither performs the duties which are essential to make a pleasant home. The same may be said of the children. It would be well if all interested were to reach the conclusion that a true home cannot be made except by the consent and the united efforts of those whose interests, and joys, and sorrows are *really* mutual. Surely home-life cannot be too seriously and critically reasoned to philosophic conclusions, nor worked out to its legitimate ends, since it is the basis of the social weal or woe of mankind.

EVENINGS HOME.—A man's wife and children have an absolute claim to a reasonable proportion of his leisure hours, and especially and ordinarily to his evening hours. Home cannot be home except in name, if this claim is ignored. Robert Southey, the poet, once wrote to a friend: "I have declined being a member of a literary club, which meet at the Chapter Coffee House, and of which I have been elected a member. Surely a man does not do his duty who leaves his wife to even-

ings of solitude, and I feel duty and happiness to be inseparable. I am happier at home than any other society can possibly make me."

Yet the true wife will not be too imperious in her demands. She will somewhat be able to understand that the average man, if he is ever so kind and affectionate, feels the need of an hour or two of recreation after a busy day, or of association with other men, which his wife ought not to discourage. After that, if actual business does not call him from home, his presence is her prerogative, but on this condition, if she will do her part to make home pleasant. In this she cannot be really successful unless nature, or culture, or both have previously prepared her to assume home's regal throne; even then she will not be successful unless she puts her womanly qualities into pleasant and assiduous activity, and this usually means victory. It is deeply to be regretted, however, that all this and more will be totally ineffectual with some men who keep their wives as a matter of business, or of convenience. The respectable wife who is placed in the hands of an egotist who absolves himself from domestic duties, which he should count as privileges, deserves the kindest sympathies of every man and woman; so does she whose husband is a heartless domestic tyrant.

Fault-finding.—Is there occasionally a home in which the husband finds fault with his wife for everything which seems to go wrong? Does he severely criticise her cookery, her words, or her deportment? Even if polite to every other lady, is he rough and unkind to his own wife, the best friend he ever had, or ever will have? Is he slovenly in his habits, to her continual annoyance? Has he forgotten that he took that fair girl from a happy home, with her faith and confidence in him, and her love for him, strong as her life, immortal, she believed, as her soul? Is this the price he pays her, and the compensation she receives? But surely he would make his wife happy? Then he must freely give her his entire confidence, sincerest love, and kindest treatment. The best natured of men may chance to get out of humor occasionally; if it occurs only by chance, and seldom, the genial wife will excuse him, and let him storm away

and bite the table, if he will. Are there husbands who seldom get up any other than "the wrong way?" To whom the breakfast, and the wife, and the children, and the servants, and everything and everybody (excepting, of course, himself) are all wrong; and upon whom he descends as does the pitiless gale on the grain and the delicate flowers? Are there men, intelligent enough to know better, who thus continually, persistently maintain a severe behavior, until their own manhood is utterly extinguished? Until the fair humanities of their wives are blotted out? Until they look upon their husbands with the grim emotions of the cannibal? Or, on the other hand, can it be possible that wives are sometimes the venomous, hot-spirited, impetuous, worse half of the two-sided humanity, always scolding, and snarling, and sour, and satirical with their husbands, children, and servants?

In many abodes called home, there are far too many stormy, disagreeable, growling, sullen days, in which there should be refulgent sunshine. So many "tempests in the tea-pot" are quite unnecessary, and utterly shameful. Neither husband, wife, nor children have any business to make their home a place of infelicity, composed of little irritations, ill-natured words, and peevishness of temper. A strict, persevering, generous performance, by all concerned, of all the duties which belong to them, is a cure which will make any home a heaven above domestic clouds and storms.

ABUSE.—The wife cannot make her home a success in every sense unless she is long-suffering and affectionate. To the shame of men, there are husbands who not only give their wives plenty of opportunities to be long-suffering, but crowd this word on them transposed—*suffering long*—with that terrible intensity of emphasis which crushes the spirit, the peace of mind, and the happiness, if not the very life, out of the poor, jaded, vexed woman. Why is any brute in human form permitted to have a respectable wife?

All men are not inhuman. The *best* man is very much human —very little divine. The *average* business man, after a hurried breakfast, launches out into the busy whirl. His furnace of ex-

citement is kindled in the early morning, and glows at a red heat all day. When he returns home at night, he is tired, sometimes, perhaps, a little irritable or cross; and if the wife allows herself to become inflamed with her husband's present mood, then—! On the other hand, a pleasant smile and kind words from her loving heart contain the power to quiet the mutterings which foretell an impending storm, restore the peace of his vexed brain, and all is quiet happiness again. Such is woman's invincible weapon—the cord that will bind her husband, if he is human, to his fireside and to her heart.

Ladies see two sides to this question of "quieting turbulent brains?" I see *three* sides. The first, with the remedy, has just been considered. The second side is the scene reversed, the wife being the tired, vexed one; in which the husband must be the physician, and administer the same remedy to her as she was asked to administer to him.

The third side is that in which both husband and wife are weary and cross; and the remedy is *social silence until the domestic heavens become serene.*

The wife should not lose sight of the fact that woman's nature is finer, more confiding, and more naturally expressive of affection than that of man. Therefore, whether a home shall be pleasant depends very greatly upon her. If she will have an earnest, perpetual desire to make her husband and children happy, let her extend to them her woman's sympathy, her dearest active love, and all the excellences which flow from sympathy and love, and she will have found the realization of personal peace and happiness; she will have dealt a masterstroke toward making her home an earthly paradise. While the influence of woman should be thus salutary, she ought not to forget that her influence, when perverted, may be pernicious, even when she thinks she is really acting the part of an exemplary wife and mother.

PERMANENT HOME.—One of the first things which a young married pair should have in view is a house of their own. In order to make the house a *home*, in any true sense, the means must be used which will tend to make it so.

The want of permanency of residence is a most unhappy fault of many families. After they get partially ready to live, they are ready to move. This frequent shifting effectually prevents the growth of the sweet, pure, and enlightened sentiment of man—the love of home because it *is* home. Those can appreciate the meaning of this who have spent many years of life in the "dear *old* home," and then gone away from it forever. When our minds revert to the old spots, scenes, and companions of other days, to father, mother, brothers, and sisters, the most tender chords of our souls thrill amid the blessed memories. If the home of our childhood was a happy one, it is doubtless quite as sacred to any other being as to us, for early impressions abide. But we cannot all remain in our native nest, and therefore should learn to become affectionately attached to the one of our adoption. To ensure this it may be necessary to place ourselves under discipline. To blend the make of the country, the richness of the soil, the birds, the sky, moon, sun, people, and everything in harmony with our imagination and affection, making them all do us service. The following letter, written by more than friend of mine, and not intended for publication, expresses so well my meaning, that I will copy it entirely; perhaps I shall receive a scolding, and perhaps a blessing from some homesick woman.

"My own dear mother:
"You did ask me of this west world,
How I liked it, how it pleased me;
If the sun shone here as brightly
As in the lands I've left behind me;
If the weather here was warmer,
If the weather here was colder,
If the heavens here were bluer
Than in the land I've left behind me.
I will answer, I will tell you
That the heavens here are bluer,
Less o'ercast with low'ring shadows
Than in the land I've left behind me;
That the sun shines very brightly;
That the weather here is warmer;
That the birds sing very sweetly;

That the deer go bounding onward
Passed by, have a few brief seasons,
Since the untamed savage roamed here—
Roamed at large o'er these prairies
Hunting the buffalo and the wild deer—
From behind the jungle thicket,
Where the savage lay in ambush,
Sped the arrow barbed and onward—
Onward in its bloody mission.
Here they lived, and here they hunted;
Here their bark canoes have floated
Swiftly down the Cedar river.
Sang they here their frightful war-songs;
Danced they here their savage war-dance,
And these woods and these prairies
Oft have echoed to their war-whoop.
Here the smoke from out their wigwams
Rose up to the bright blue ether
And beneath the midnight goddess,
The pale moon. Indian lovers
Oft did woo the dusky maidens,
Asking them to share their wigwams,
Plant their corn and dress their venison.
But 'tis past, and westward—westward
The wild tribes now have journeyed
In the hopes of finding forests,
In the hopes of finding prairies,
Where the paleface ne'er lingered.
Thus they left our fair Iowa,
Left it for the white man's coming;
They have passed like fleeting shadows,
Leaving but some names to tell us—
Tell us of the tribes that once were.
We have now built up homes here,
And a paradise we call them—
Call this e'en a second Eden,
This our bright and fair Iowa,
For the wild flowers bloom so brightly,
And the birds they sing so sweetly.
We love it, dearly love it,
As a home by nature fashioned.
I have answered all your questions,
But have told not half the beauties
That this western world possesses,
For I cannot well indite them."

That a pure love of home may become a part of our very selves our habitations must become fixed and we must own the houses we live in. The financial means of some may be such that they cannot at first build houses and own them. In that case let the alternative be to hope and wait, but not with folded hands. Industry, frugality, good management, contain the force by which cash may be evolved and hopes changed into realization.

By frugality in this connection I mean *that* in its strictest sense. A young couple may believe they are frugal and still almost daily let slip fifty cents here, one dollar there, for purposes and things which they can get along as well without and which bring no beneficial returns.

By industry I mean a constant employment during business hours of one's time to purposes of honest profit, even if the profit cannot be great. For instance, if a man be a laborer, and can get one dollar a day, but will not work because he cannot get two dollars, he is not industrious nor wise. One dollar a day is far better than nothing, and so his wife and children think. If a man be a merchant and absents himself from the store during many business hours for no better reason than that trade is dull, he is neither an industrious, wise, nor a successful business man. How does he expect ever to build up a lucrative trade unless he is at his post and attends to his business? If a man be a farmer and spends unnecessary time in the city, trusting hired men to manage the farm, or because the productions of the farm are low, he imagines he cannot afford to work to raise those productions for the prices he can sell them for—surely industry or common sense is wanting in that farmer. The lower the prices are the more he should have to sell, and the more labor it will require to produce them. And

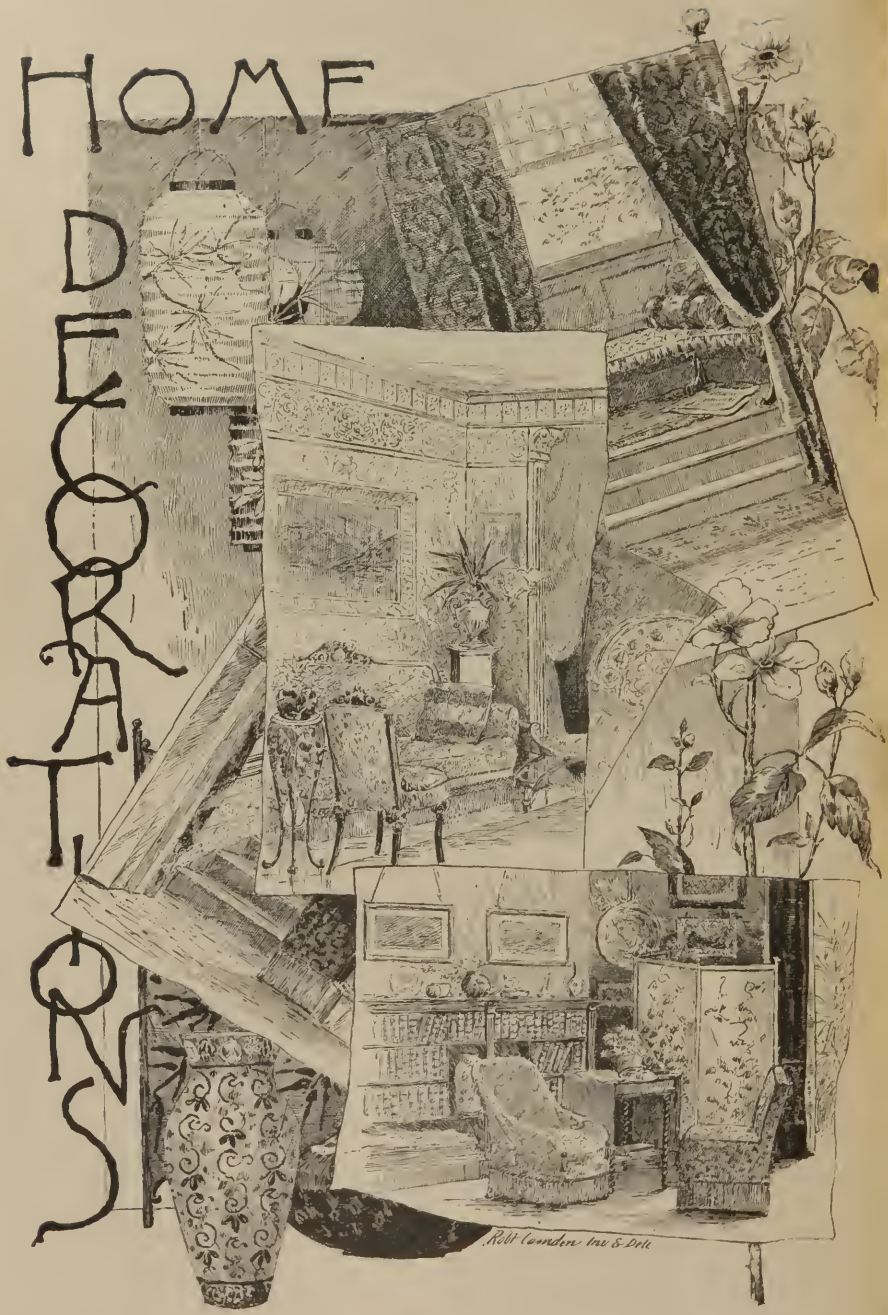
> He who by the farm would thrive
> Must either hold the plough or drive."

HOME SURROUNDINGS.—In owning a home, what about the house and its surroundings? Over on Chaos street is one (and there are many such streets) which may briefly be described.

Several pickets are broken off the fence. The gate is off its hinges. There is not a green spot, except the weeds, in the whole yard—mud, mud everywhere. The hoe, shovel, ax, saw, rubbish, are scattered around as if a whirlwind had been playing at dumb-bells with them. Grandpa's old coat, thrust into one window where a glass ought to be, and half a dozen old hats, coats, etc., give to the other windows their inauspicious opacity. As you pass into the house you will find the whirlwind itself in all its omnipotence. It is in the perpetual quarrelling of the children, in the chaotic motion of the fragmentary furniture, in the drift, variety, and depth of the dirt, and in the harsh voice of the mother rising above the rattle and the roar. That is *one* kind of home, and far too numerous all over the land, but we will not choose it for our own. So we will walk along together and find by-and-by a home far more desirable.

We are to remember that it need not take a large sum of money to build a house which can be made into a cosy, happy home. It is certainly nice to own a fine spacious residence, and if one is able it is well; but the saying is true that love in a cottage may be as refined, sweet and joyous, as love in a palace.

A house should be made convenient, so that wife or servant need not work all the vivacity, cheerfulness and happiness out of her. Even if the workmanship be cheap, it may as well be constructed in a tasteful manner as in an awkward one. If the furniture be inexpensive, it may at least be neat and symmetrical. The hand of a skilful woman can construct many little things of use and adornment, which wonderfully help to make the house cosy and inviting. The air and sunshine freely admitted into apartments are not only preservative of health, but tend to preserve contentment and good cheer. If the home be blessed with children—and home is incomplete without them—one room should, if practicable, be provided especially for their use when the weather is too inclement for them to play out-doors, and in which their freedom and joy may be unrestrained. This is not simply a matter of convenience, for the room will become endeared to them and be the means by which their minds will


HOME
DECORATIONS

be educated to think of and love home as something dearer than a place merely to sleep in.

While every woman should esteem it a pleasure to keep the house neat, cozy, and in order every way, she should remember that houses are made to live in, and for families to enjoy the full fruitions of life in. There is a vast difference between ladies of equal general intelligence in their ability to make home beautiful and attractive in its beauty. On entering the house of one of your neighbors, you find the carpets, furniture, wall-paper, and everything out of harmony with each other. The chairs, and sofas, and tables, and rugs, and vases, and pictures are arranged with mathematical exactness. The older daughters sit stiffly around the room, seemingly as fixed as statues, and the younger children are on dress parade. Not a speck of dust in the whole domain. Everything is costly, and in the strictest conformity to the household's sense of propriety, and yet everything is somehow tasteless, angular, icy, and barren. While this is not the *best*, it is surely a great improvement on a disorderly and dirty home. It is hard to understand how a filthy, disorderly house can be any more salubrious morally than it is physically; or how one staying—not living—therein can maintain even a respectable purity of soul or personal manliness. Experience teaches that those who inhabit such a house are burdened with a weight, a strong tendency of which is to drag them down towards barbarism, or to the level of beasts. Plenty of room, plenty of wholesome air, flow of sunshine, strict cleanliness, and gracefulness of deportment wield a vast power in the possibilities of human nature.

As you enter the house of the next neighbor, the lady greets you with a cordial welcome, a cheery dignity, and a swanlike grace, which at once puts you at your ease. The room is prettily furnished. There is an omnipresent neatness, coziness, and order. Though *nothing* perhaps is very costly, *everything* is arranged with care and taste, and there is harmony of form and color everywhere. The whole household are free, mannerly, joyous, and your heart is glad to look upon a home so modestly beautiful and so beautifully charming. Happy husband—joyous

children, and "She is the fairy princess whose words are pearls and diamonds."

UNHEALTHY HOMES.—It is a common saying that a man is apt to die soon after he moves into his nice, new house. Having perhaps commenced life poor, by dint of toilsome industry and careful economy he has accumulated sufficient means to feel able to build an elegant home. Having built it, he anticipates, in the gladness of his heart, the happiness of many years therein, but, alas! the house too often proves to him, or to some of the family, only a quick transport to another world. Is it Providence that frowns on his prosperity, and his desire to be and to make his family comfortable, and then strikes him down? Or rather is not the fatal cause found in something more tangible and material? Death lurks in the dampness of the material of which the house is composed, not in God's displeasure. Professor Pentenkofer estimates that there are 10,000 gallons of water in the walls of a house containing 100,000 bricks, and he advises that nearly all of this water should evaporate before the house is inhabited. Three months for a house of brick, and two months, if made of wood, is soon enough to move into it after completion.

Before moving into an old house, its history should be learned. A house, the record of which is bad, in a sanitary point of view, should be shunned, whether the much sickness has proceeded from a known or unknown cause. In every case, before an old house is reoccupied, a most thorough cleansing, repapering, whitewashing, etc., from cellar to attic, should be had recourse to. The drain-pipes, water supply, and surroundings should be carefully inspected; and all filth, rubbish, or other causes which might engender disease, should be removed.

THE YARD.—The house and home are incomplete without a nice yard. A neat fence to surround the yard, and a few plants, shrubs, and trees to be planted within it. Concerning the shrubs and trees, care should be taken about future sunlight, for no house, or room in the house, should be obscured from an abundant light of the sun. Trees and shrubs will be quite inexpensive, yet healthful, and their beauty and redolence will add much to the pleasantness and charms of home.

If a man cares to keep the frown from his good-natured wife's brow, and the scold from her lips, and the ominous fire from her eyes, and prefers a smile for him, he must have good walks around the house. The first rainy day will make clear the necessity.

DRESS.—The familiarity between husband and wife sometimes leads to negligence of dress and personal appearance; and it is a sad mistake that it should. A gentleman likes to see a well-dressed lady, and he cannot see one in the person of his wife if, at home, she is accustomed to be about with uncombed hair, her dress open half way down the front, petticoats hanging far below the edge of her dress, cuffs and collar unclean, under-clothing or outer-clothing torn or dirty, and herself unwashed. Is it *very* strange if the husband is somewhat attracted by other ladies—his wife's opposite? and if he pays them just a little more courtesy than his wife thinks he should? or almost as much as he does her? She need not be astonished. In every case in which the husband seems to be estranging himself from his wife, it were well to scrutinize herself, and perhaps she may find a reason for it which she can remove. In the case under consideration, she not only makes and keeps herself unattractive at home, and thus shows disrepect to her husband, but repeats the error when she goes from home, in that she dresses herself for the occasion, and thus shows more respect to others than to him. A lady should not dress better than her financial circumstances will permit. It really matters not so much about the *cost* of her attire, as it does about its making, its cleanliness, its entireness, and the manner in which it is worn.

As with the wife in these things, so with the husband.

MAKE HOME HAPPY.—Home being established, the husband and wife should enter it with the fullest determination to make each other happy. The few aphorisms hereupon given are commonplace, and what perhaps already are known. The infelicity of decent families does not spring so much from ignorance as from inattention, listlessness, or thoughtlessness of the necessity for *practicing* the duties and courtesies which essentially must accompany the intimate relations of married life. The object

here is not so much to instruct as it is to enlist the attention to these familiar but essential things—*to keep them in the minds of the people.* If each will practice the suggestions given, maintain in their deportment every great and small affectionate civility, a free interchange of thought and feeling, cultivate self-denial, so that the selfishness of the one shall never encroach on the rights of the other, they will have the warp in which they may so fill in the woof as to make the perfect web of life, and of the finest and most desirable texture. With other aids to this result, it is well to remember the Christmas day. The chimes of the Christmas bells are very sweet, but the music is more than that of bells. It is the chiming of the inner soul that brings back to us the music, festivities, joys, and the youth of other days. Christmas restores us to childhood with our children, puts us into sympathy with those to whom this day, of all others, is so dear, and so full of the sweetest cheer; and it *should* put us into harmony and love with the "Christ Child," whose anniversary we celebrate.

> "These shall resist the empire of decay,
> When time is o'er, and worlds have passed away;
> Cold in the dust the perished heart may lie,
> But that which warmed it once, can never die."

We are endowed with the power to make our homes what we will. *Will* we make them places of squalor, domestic conflicts, of unrest and unhappiness? Or—

> "But happy they! the happiest of their kind!
> Whom gentler stars unite, and in one fate
> Their hearts, their fortunes, and their beings blend.
> 'Tis not the coarser tie of human laws,
> Unnatural oft, and foreign to the mind,
> That binds their peace, but harmony itself.
> Attuning all their passions into love;
> Where friendship full exerts her softest power,
> Perfect esteem enlivened by desire
> Ineffable, and sympathy of soul,
> Thought meeting thought, and will preventing will,
> With boundless confidence: for naught but love
> Can answer love, and render bliss secure.

Meantime a smiling offspring rises round,
And mingles both their graces. By degrees
The human blossom blows; and every day,
Soft as it rolls along, shows some new charm,
The father's lustre and the mother's bloom.
The infant reason grows apace, and calls
For the kind hand of an assiduous care.
Delightful task! to rear the tender thought,
To teach the young idea how to shoot,
To pour the fresh instruction o'er the mind,
To breathe the enlivening spirit, and to fix
The generous purpose in the glowing breast.
Oh, speak the joy! ye whom the sudden tear
Surprises often, while you look around,
And nothing strikes your eye but sights of bliss,
All various nature pressing on the heart;
An elegant sufficiency, content,
Retirement, rural quiet, friendship, books,
Ease and alternate labor, useful life,
Progressive virtue and approving heaven.
These are the matchless joys of virtuous love;
And thus their moments fly. The seasons thus,
As ceaseless round a jarring world they roll,
Still find them happy; and consenting spring
Sheds her own rosy garland on their heads:
Till evening comes at last, serene and mild;
When after the long vernal day of life,
Enamored more, as more remembrance swells
With many a proof of recollected love,
Together down they sink in social sleep;
Together freed, their gentle spirits fly
To scenes where love and bliss immortal reign."

The following beautiful lines, by Dean Stanley, were first published after his death by *The Spectator*, and evidently written after the death of Lady Augusta Stanley:

"'Till Death us part.'
So speaks the heart,
When each to each repeats the words of doom:
Through blessing and through curse,
For better and for worse,
We will be one, till that dread hour shall come.

"Life, with its myriad grasp,
Our yearning souls shall clasp,
By ceaseless love and still expectant wonder:
In bonds that shall endure,
Indissolubly sure,
Till God in death shall part our paths asunder.

"*Till Death us join.*
O voice yet more divine!
That to the broken heart breathes hope sublime
Through lonely hours
And shattered powers
We still are one, despite of change and time.

"Death, with his healing hand,
Shall once more knit the band
Which needs but that one link which none may sever:
Till, through the Only Good,
Heard, felt, and understood,
Our life in God shall make us one forever."

INFLUENCE OF THE MIND UPON THE BODY IN HEALTH AND DISEASE.

"Man is all symmetry,
Full of proportions, one limb to another,
And to all the world besides.
Each part may call the farthest brother;
For head with foot hath private amity,
And both with moons and tides."

A systematic treatise on this subject of absorbing interest would require a hearing under many separate classes and chapters, such as the influence of the intellect upon sensation, the influence of the intellect upon voluntary muscles, upon involuntary muscles, upon the organic functions, influence of the emotions upon the different parts of the system in separate chapters; the same of will, etc. The object here is simply to touch upon a sufficient number of points to convince those who are not already convinced, that the influence of the mind upon

the body has a very important bearing on the health and life of man; that it is of the utmost importance to maintain uppermost that mental tranquillity, force of will, and other sanitary intellectual preservers and restorers which play so grand a part in the beautiful economy of our natures.

A normal activity of the mind not prolonged beyond the limited strength of one's organization, is conducive to health and longevity. An abnormal or over-activity means stagnation or over-wear, and is destructive mentally and physically.

The world is full of the beautiful, and all things necessary for man's entire enjoyment. Give one health and a well-balanced, educated mind, and he has, if he only knew it, the talismanic power to drink his fill of the world's fruitions. The mind as connected with the body—how sublime, and how it passes understanding! It not only influences our own health and that of others, but also our own feelings, motives, acts and those of others. One indomitable spirit, zealous to bring about an important end, wherein the concurrence and aid of many are required, will stir and sway the multitude, move men to action as the winds of heaven move a forest, incite them to "rage and war," or to deeds of mercy. Such is the magnetic power by which man masters men.

To illustrate the power of man's mind over his own body, and of mind over mind, we will mention several mental states, and mental activities, with some of the effects produced, and the reader, if ever so unlearned in these things, can draw practical lessons from them.

IMAGINATION IN DISEASE.—Special attention of one's mind to any part of the body may cause anxiety, and the anxiety may originate imaginary or actual disease. The principle at the basis of such influence is, that thought concentrated on any special part of the person tends to increase the flow of blood to that part, and consequently to increase its sensibility, and the sensibility to arouse the emotions, and imaginary or actual disease. For example, if you concentrate your attention on your thumb very intently, and assume that you feel the sensation of pain in it, you will probably be successful. Professor Wood

said that he never treated a case of sore throat without suffering more or less from the same affection. Dr. Sydenham was thrown into a lingering hectic, while writing his treatise on fevers. He continues: "I then applied myself to the study of several authors who have written on phthisical distempers, and by that means fell into a consumption, till at length growing very fat, I was in a manner shamed out of that imagination. Not long after this, I found in myself all the symptoms of gout except pain, but was cured of it by reading a treatise on gravel."

So a solicitude for any organ of the body is likely to give discomfort, and functional disease. Thus if one has eaten some food which he fears will not digest, his fears will probably cause indigestion. For anxious attention directed to the stomach causes a sensation of weight or other abnormal feelings, and if the anxiety be prolonged, dyspepsia will often ensue.

A person when young frequently sailed on a body of water which was often rough, and in consequence he suffered from sea-sickness. On the boat was a fiddler who played his instrument to relieve the sufferings of the sick. The result was that the fiddle and sea-sickness became so associated in this young person's mind, that for a number of years he could not hear a fiddle without its causing nausea.

The lessons to be drawn from the above mental fixation and examples are obvious.

Mental Abstraction.—On the other hand, thought directed *from* any part of the body has a tendency to diminish the flow of blood, and sensibility at that part. That is, the influence is the opposite of the above. Thus during mental abstraction—or when the mind is wholly drawn from self, and intently placed on some other object, one may be insensible to injuries received, or to the pain of disease. Hence the soldier amid the excitement, din, and roar of battle, is often unconscious of the wounds he receives. The sick man suffers less pain when his thoughts are turned in another direction, as during appropriate conversation on other subjects than that of his illness. Here then is a mental remedy which frequently is as effectual and often far

more desirable than an opiate: the diversion of the mind of the patient from his sufferings.

THE INFLUENCE OF IMAGINATION ON PHYSICAL SENSATION.—When one sighs at the sight of a person who reminds him of another that is sorrowfully associated in his mind, he is under the influence of imagination.

So when a child hears water mentioned, and instantly is thirsty.

During a battle, a soldier thought that both of his legs were cut off by a cannon ball, and he lay on the ground all night fearing to stir lest hemorrhage might end his life. What was his surprise as well as his joy when in the morning he was informed by one of the medical staff, who came round to care for the wounded, that both of his legs were sound and on his body! The ball, instead of cutting off his legs, had passed under his feet, plowing a trench a foot deep in the ground, into which the soldier sank.

Professor Bennett, of Edinburgh, relates the case of a butcher, who in attempting to hang a piece of meat upon a hook, hooked himself up instead. He suffered torture until he found that the hook had only passed through his sleeve!

For the purpose of ascertaining the effect of imagination over the sick, Du Cros directed a nurse in a hospital to give all the patients a medicine which naturally would produce no effect, and then tell them, that through mistake she had given them a powerful emetic: out of a hundred patients, eighty vomited profusely.

While it is true that the attribute of the human mind called imagination is of inestimable value, it is a part of wisdom to awaken ourselves to the fact, that our mental and physical welfare demands we keep that faculty under subjection and within rational bounds.

The following represent states or acts of the mind which belong to the sensations, the emotions, or the will; though frequently the imagination is commingled with, and plays an important part in those states, or acts, and their results.

1. *Brooding.*—The ultimate results of brooding over the ills

of the body are to make those ailments, which originally were of little consequence, *bad;* and those which were originally bad, *worse*—arousing, it may be, the messenger of death from his slumbers. Shakspeare was right when he said:

> "The thought whereof
> Doth like a poisonous mineral gnaw
> My inwards."

And again when this state is combined with anxiety:

> "I feel such sharp dissension in my breast,
> Such fierce alarums both of hope and fear,
> As I am *sick* of working of my thoughts."

2. *Associations.*—The mere presence of others is sometimes a cause of disease, such as hysteria, which, in part at least, is under the control of the will. That this affection is more or less under the control of the will is shown in that the patient is often inclined to have paroxysms in convenient places and when others are present. Such is their desire to gain the sympathy of others.

3. *Pleasurable emotions* accelerate the movements of the heart and of respiration, and thus favor the purification of the blood. They also favor healthy action of the secretory, digestive, nutritive, and indeed of every organ of the body.

4. *Depressing* emotions, as of sorrow, grief, fear, and the emotion of anger, have the opposite effect on the organic functions, that of prostration. That they will also change the nature of organic secretions experience has often proved. For example. Mrs. W. nursed her babe while under the depressing effects of sudden grief. Convulsions soon came on and ended the little one's life.

Experience has also proven that these mental states actually breed disease. Thus, during an epidemic of cholera, the intense fear felt by some often invites the disease in themselves.

5. *Moderate excitation* of the passions has, in some respects, effects on the body similar to mild stimulants. Intense excitation has the effect of powerful stimulants in over-doses, at first

heightening the nervous and arterial forces, followed by a reaction in a degree corresponding to the previous excitement, often sufficient to cause jaundice, epilepsy, apoplexy, etc., and sometimes sudden death. Among these passions anger stands pre-eminent. John Hunter died from angina pectoris, and the fatal attack was brought on by a fit of anger. But even joy is not always innocent, as many cases have shown. Thus, Sophocles, when crowned for a successful tragedy which he had composed, immediately died from excessive joy. Therefore we should rule our emotions and passions, not permit them to rule us. Mankind are not usually over-burdened with joy—anger, too often, is both king and tyrant.

6. *Mental Depressions.*—On the other hand moderate care, grief, anxiety, and other analogous mental states and impressions act, in their injurious effects, like material sedatives. But when carried to extremes, instead of generally producing sudden death, as a poisonous dose of opium would, they so influence the functions of the nervous system, and through the nervous system the functions of the heart, stomach, liver, and other organs, as to be the immediate or remote cause of many serious diseases—provoke by their mere downward, passive force, disease from perfect health. When one is already suffering from any affection, these mental states persuade one to gaze down into the valley of death, from which awful shadows will rise up to meet one in all their ghastly forms. His perverted imagination becomes the merciless prey to horrible shapes in those pictured scenes, and he beholds approaching, on swiftest wings, the time when he with all his woes shall sink into the darkness of the grave, and already he feels the cold earth rattling on his coffin.

Thus many suffer and perish, victims to their dismal forebodings. Therefore the following proposition may be stated: When a patient, from indiscretions of attendants, or from any other cause, becomes overshadowed with gloom and despondency, and feels a certain expectation of dying, the terrible weight of the impression is apt to crush him dead. The clinical lesson for us to learn from the proposition is: *preserve—compel* the *survival* of *cheerful expectation* and *a strong, abiding hope of recovery.*

Muller expresses himself as follows with regard to the power of expectation: "It may be stated as a general fact that any state of the body, which is conceived to be approaching, and which is expected with a certain confidence and certainty of its occurrence, will be very prone to ensue as the mere result of that idea." Therefore the expectation of every patient should be so directed as not to kill, but to keep alive.

7. *Disappointment*, when very great, as when connected with love, operates in a manner similar to despondency. It, indeed, often eventuates in the most inconsolable despondency.

8. *Mental anxiety*, when prolonged, and especially when directed to any organ of the body or special ailment, is a prevalent cause of nervous derangements—often of dangerous organic disease—and is also an inviting cause of perpetual and indiscriminate *dosing*. There is far too much inconsiderate dosing by many who are, or think they are, chronically out of health. It is here that the numberless patent medicines and travelling newspaper advertising doctors have their stronghold. Those nostrums which are advertised in such glowing terms as remedies for many or all diseases, with all the certificates added of most wonderful cures, have, somehow, a magical charm to many who are never really sick and never well. They grasp those nostrums with an avidity really marvellous. The intelligent ought to know, and would know were their reasons permitted to govern them, that there can be no medicine which is capable of curing with any degree of certainty even *one* disease in its different forms and stages, much less all diseases. Do you feel yourself capable to choose the correct remedy for any special stage or peculiarity of any disease? Surely those who use medicines ignorantly know not what they do; at the best they can have no more than a vague, undefined, jump-at-the-conclusion notion that a cure in some mysterious manner will be effected.

In regard to the kind of doctors referred to, it seems *very* hard for many to understand that a physician, who is really superior to most or all others, need not, and will not, *travel* for *business*. *Patients will seek for him—not he for patients.* Were doctors of

the circulating class what newspaper advertisements say they are, we should feel that they possess a power over disease almost equal to that which "The Great Physician" himself wielded when on earth, and that they could and would locate in the great cities, where the multitudes would flock to them from all over the land. In practice, however, those very men are obliged to go from place to place and blow aloud their brazen trumpets! Are they not grand men on a grand work of mercy? Or, rather, are they not land-sharks in human forms, who line their pockets with the people's gold, because of the popular overweening affinity for what is considered marvellous and of their own unscrupulous venality? In other matters, the intelligent use their reason; in this, their morbid imagination. If one thinks he needs medicine is it not about as wise to consult some physician of his acquaintance, or of known reputation and ability, and have the same implicit faith in him as in quacks?

9. *News at Meals.*—Certain ideas will produce a copious flow of saliva into the mouth, while other ideas or emotions will produce a dryness. Since saliva is essential to the perfect digestion of some kinds of food used at most every meal, it is self-evident that no state of the mind should exist at meal-time, which tends to interfere with the normal functions of the salivary glands. For example, bad news received while one is eating will usually destroy the appetite, and it is well, for the saliva and gastric juice will cease to be secreted and hence digestion arrested. If one continues to eat under such circumstances the undigested food for a certain length of time will remain in the stomach; then nature will either throw it off by the act of vomiting, or else the stomach will labor and falter, turn and overturn its load, the load itself fermenting instead of digesting, and either temporary debility or serious illness will ensue.

10. *Hearing.*—As regards the sense of hearing, one's uppermost idea of what the sound says, or seems to say, will often give the sound character. For instance, if of two persons listening to the song of a bird, one is told that it says "whippowil," and the other, "kill you," the song may sound to each as he was told.

11. *Taste.*—Food or drink will assume a very different taste, in accordance with the imagination.

12. *Feeling.*—If you hold in your hand a dish of warm water, and you say to a person, "I will throw this ice-water in your face," and suit the action to the word, it will at first be ice-water to the person on whom it is thrown, and it will take a little time to find out his mistake. This is a plan sometimes taken to frighten away fits of hysteria. From the same cause the thought of intense cold in midsummer will often make one shiver, or one may almost

> "Wallow naked in December snow,
> By thinking on fantastic summer heat."

13. *Fasting.*—The effects upon the mind of long-continued fasting are vividly portrayed by Dr. Kane in the narrative of his journey to the Polar Sea, where he and those with him were reduced to extreme hunger and weakness. He says: "I observed that in proportion as our strength decayed, our minds exhibited symptoms of weakness, evidenced by a kind of unreasonable pettishness with each other. Each of us thought the other weaker in intellect than himself, and more in need of advice." It is from the psychologic effects of hunger on man that the saying probably originated, "If you want a favor from a man, ask him after he has had a good dinner."

14. *Continued hard study*, or long-sustained thinking, diminishes the activity of digestion and of nutrition, because the powers of the system are withdrawn from these organs and spent upon the organ of the mind. Shakspeare seems to have had this fact in mind when he made Cæsar say

> "Let me have men about me that are fat,
> Sleek-headed men, and such as sleep o' nights;
> Yond Cassius has a lean and hungry look,
> He thinks too much."

Armstrong said: "'Tis painful thinking that corrodes our clay." And he might have added, that when thinking is too intense and too protracted, even if not painful in itself, it will,

in a less degree, corrode our clay. I do not, however, intend to carry sympathy to those who are too indolent, nor a bugbear to those who are afraid, to think; but rather a warning to those of delicate frame, who perpetually keep the enginery of their intellects almost up to the explosive point. It is not generally pleasurable, productive brain-work that produces the most fearful array of physical and mental disorders, even in the weakly, but the mental strain inhering in the high pressure of wild speculations and wilder artificial life. Of this American artificial life, we will let Emerson, the master of mental philosophy and of language, speak for us. "I think," says he, "men never loved life less. I question if care and doubt ever wrote their names so legibly on the faces of any population. This *ennui*, for which we Saxons had no name, this word of France has got a terrific significance. It shortens life and bereaves the day of its light. Old age begins in the nursery, and before the young American is put into jacket and trousers, he says, 'I want something which I never saw before,' and 'I wish I was not I.' I have seen the same gloom on the brow even of those adventurers from the intellectual class who had dived deepest and with most success into active life. I have seen the authentic sign of anxiety and perplexity on the greatest forehead of the state."

15. *Faith.*—John Hunter stated the truth when he said: "As the state of the mind is capable of producing a disease, another state of it may effect a cure." The states of mind which are the most productive of good in the cure of disease are faith, hope, and confidence, attended by a strong *will*. The cure of functional nervous affections may generally be accomplished by a well-qualified physician, and often by the basest pretender, if the patient be made *confidently* to *believe* that it will be done. A confident faith is likewise a powerful aid in the healing of *all* diseases, whether functional or organic. Neither does it all proceed from mere imagination on the part of the patient, nor from mere unwarrantable make-believe on the part of the doctor. On the part of the patient, it proceeds from the beneficial psychological power with which faith, hope, and trust, aided by the

will, are endowed. On the part of the physician, whose soul is blended with the soul of his patient, the power, the nature of which seems in a great degree obscure, is, I believe, similar in kind, though far less in degree, to that which our Saviour wielded when on earth. Happy indeed should be the physician who has learned the intrinsic value of that power, and how judiciously and scientifically to use it in the alleviation of human sufferings. To this end, nurses and all others interested should nobly aid the medical attendant in his efforts to inspire and maintain those mental states in the patient, which go to strengthen his prospects of recovery. How eagerly the sick woman watches the countenances of those around her; how the thoughts expressed there, if hopeful, send a thrill through her, arouse the courage that was almost dead, and balance back the ebb of life to the current which flows on to health. The ability to inspire confidence and hope in the breast of a poor sick man or woman, is a power of no unreal worth, and the benefaction it brings is not visionary.

> "Cease every joy to glimmer on my mind,
> But leave, O! leave the light of Hope behind!
> What though my winged hours of bliss have been
> Like angel visits, few and far between!
> *Her* musing mood shall every pang appease,
> And charm when pleasures lose the power to please."

16. *The Power of the Will over the Body.*—Every man's power is in the magnitude of his intellect and the force of his individuality and will. Every day's transactions illustrate the tremendous influence the will has over matter and mind. No great success in life is often and honestly achieved without a master will-power behind it. No man can successfully meet and conquer the temptations and antagonisms with which every one must come into contact, without a gracious supply of this force. If we say "*That* man was made to lead and to command," there is an indomitable will behind him. Sick men live on account of it, and die for want of it.

The power of the will in resisting and overcoming disease is unquestionable. Among thousands, the following is a striking

example of it, and well illustrates the force in these three words, in efficient activity, "*I will conquer.*"

Andrew Crosse, the electrician, was bitten by a hydrophobic cat. In three months afterwards he felt an intense pain in the arm and a great thirst. He says: "At the instant I was about to raise the tumbler to my lips, a strong spasm shot across my throat; immediately the terrible conviction came to my mind that I was about to fall a victim to hydrophobia, the consequence of the bite I had received from the cat. The agony of mind I endured for one hour is indescribable; the contemplation of such a horrible death—death from hydrophobia—was almost insupportable; the torments of hell itself could not have surpassed what I suffered.

"The pain, which at first had commenced in my hand, passed up to my elbow, and from thence to the shoulder, threatening to extend. I felt all human aid was useless; I believed I must die.

"At length I began to reflect on my condition. I said to myself, that either I shall die or I shall not; if I do, it will be only a similar fate which many have suffered and many more must suffer, and I must bear it like a man: if, on the other hand, there is any hope of my life, my only chance is in summoning my utmost resolution, defying the attack, and exciting every effort of my mind. Accordingly, feeling that physical as well as mental exertion was necessary, I took my gun, shouldered it, and went out for the purpose of shooting, my arm aching the while intolerably. I met with no sport, but I walked the whole afternoon, exerting, at every step I went, a strong mental effort against the disease. When I returned to the house I was decidedly better; I was able to eat some dinner, and drank water as usual. The next morning the aching pain had gone down to the elbow, the following it went down to the wrist, and the third it left me altogether.

"I mentioned the circumstance to Dr. Kinglake, and he said he certainly considered that I had an attack of hydrophobia."

17. *Mind and Body.*—We cannot here enter the broad fields wherein are found the modes in which the *mind* is affected in

individual diseases; the lesions which produce intellectual aberrations, imbecility or insanity. But we have, I trust, become aware that the mind and body are so intimately connected as to produce great influences upon each other, and in the quaint language of Sterne, we have much in a little: "The body and mind are like a jerkin and a jerkin's lining; rumple the one and you rumple the other." In the running commentary I have given I trust we comprehend that the body and mind should treat each itself and each other with fidelity and respect, and thus maintain between them a harmony so tranquil and healthful that we may tread the pleasant paths of life to a good old age, and so live that when our final summons comes, we may look back upon a life well spent, and if it please God, go down to our graves fully ripe, and fully prepared for a perfect and grand renewal of unending life.

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